

AIRPORT LAYOUT PLANS

MANCHESTER-BOSTON REGIONAL AIRPORT



MANCHESTER, NEW HAMPSHIRE

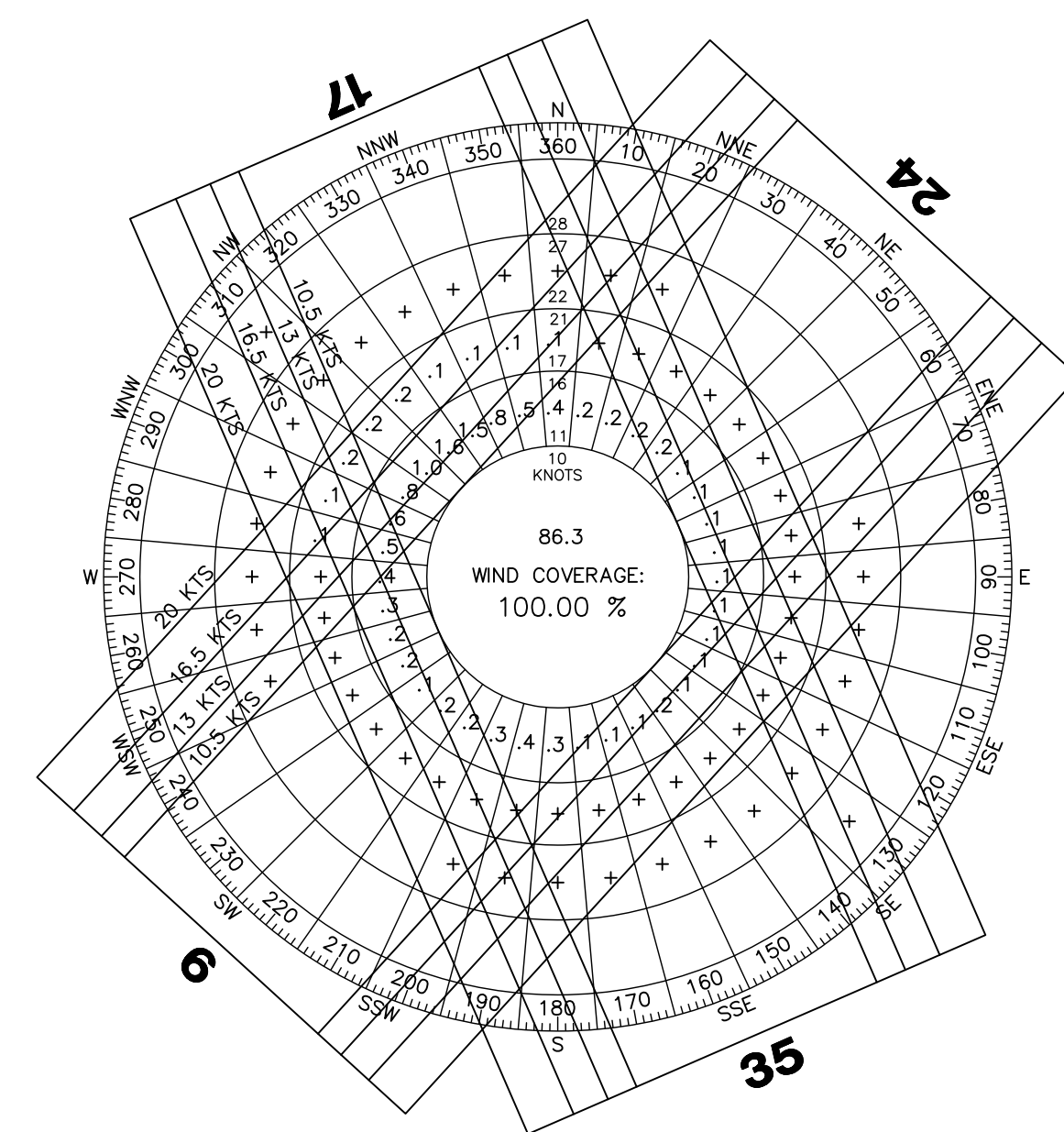
PREPARED FOR:

CITY OF MANCHESTER DEPARTMENT OF AVIATION

PREPARED BY:

URS

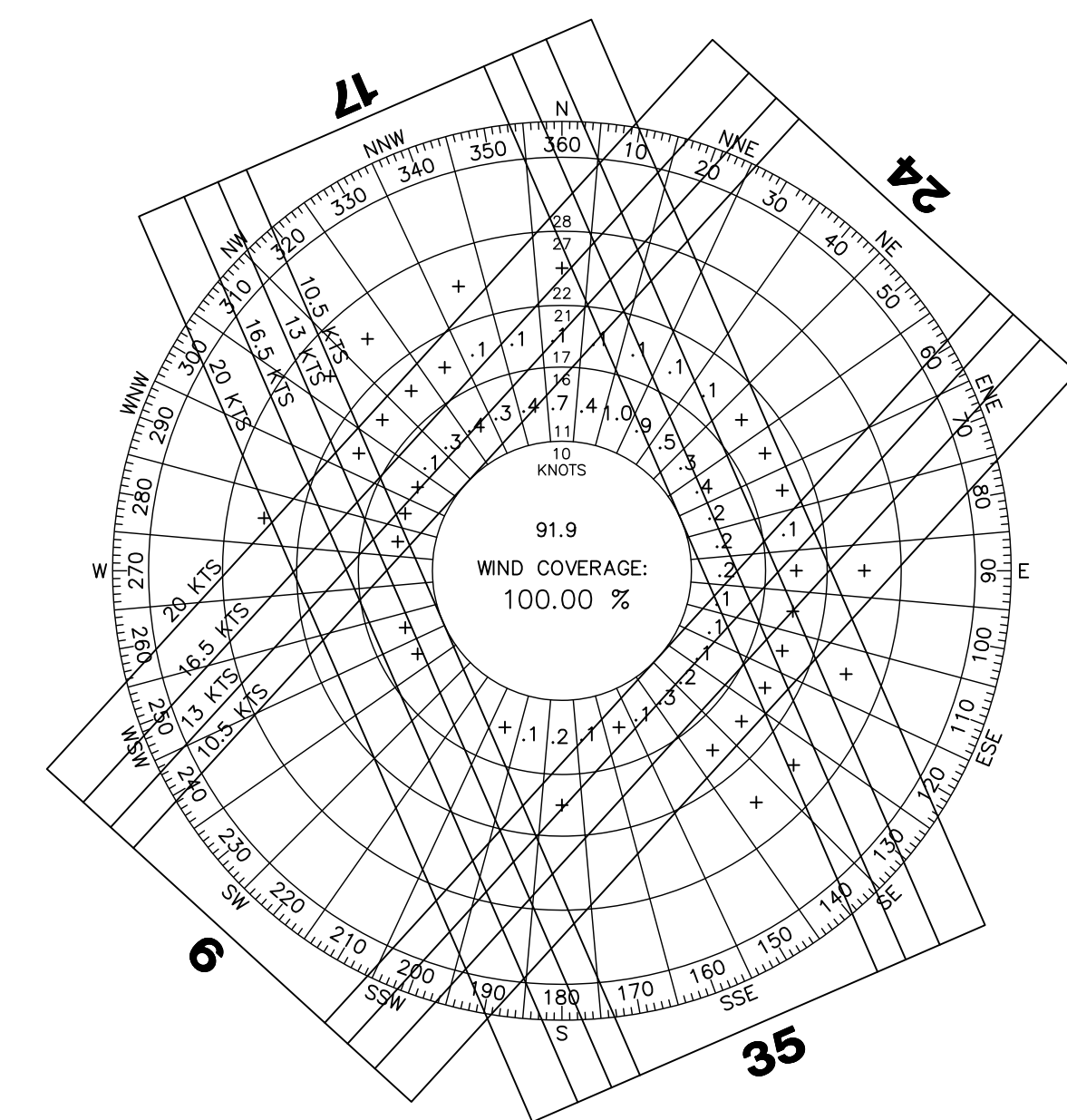
SEPTEMBER 2011
AIP No. 3-33-0011-76-2009



ALL WEATHER WIND ROSE

CROSSWIND COMPONENT	WIND COVERAGE (%)
10.5 KTS.	98.53
13 KTS.	98.48
16 KTS.	99.76
20 KTS.	99.97

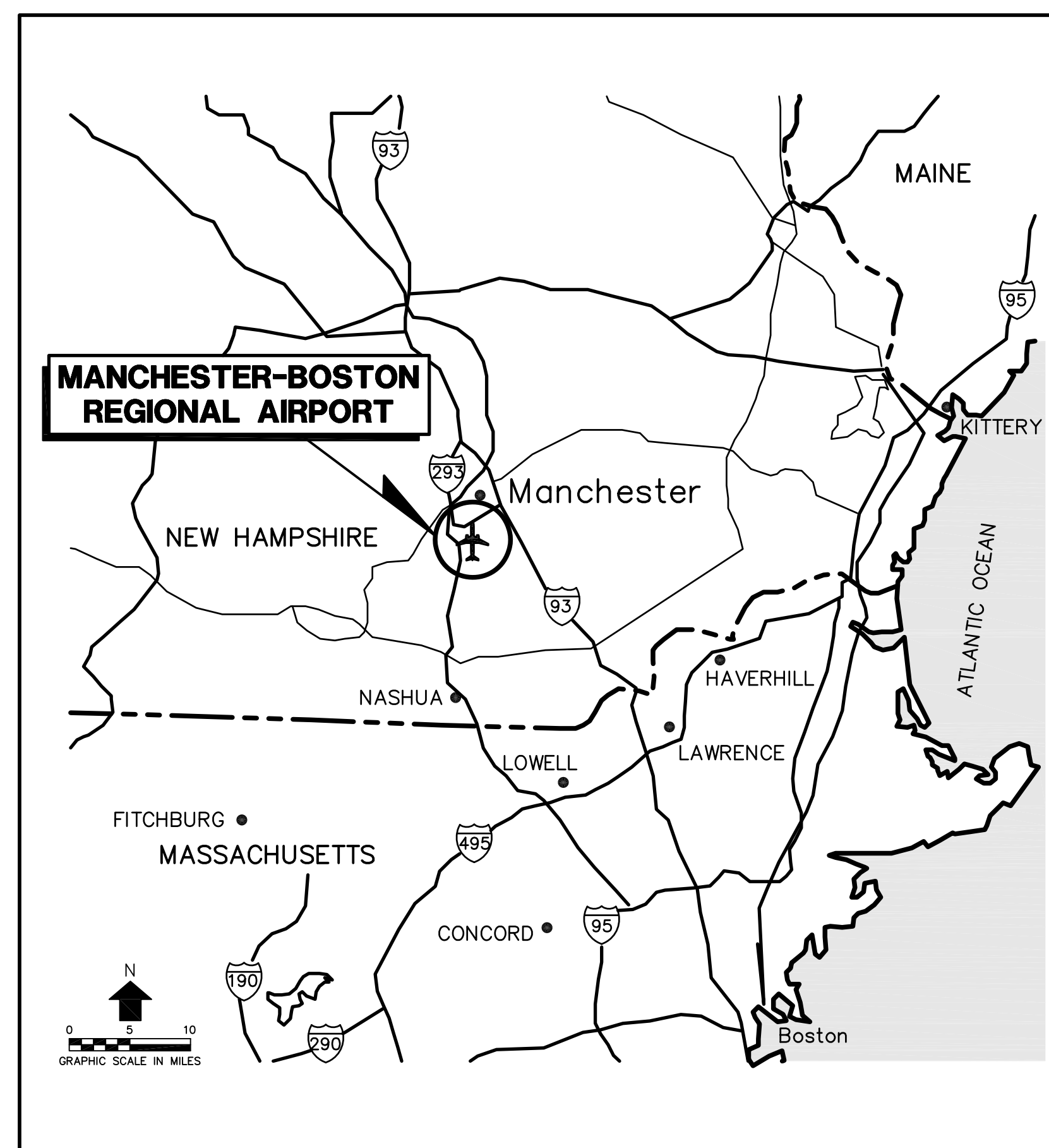
SOURCE:
NATIONAL CLIMATIC DATA CENTER
WEATHER STATION 14710
MANCHESTER, NH
DATA PERIOD: 1999-2008



IMC WEATHER WIND ROSE

CROSSWIND COMPONENT	WIND COVERAGE (%)
10.5 KTS.	98.74
13 KTS.	98.49
16 KTS.	99.67
20 KTS.	99.95

SOURCE:
NATIONAL CLIMATIC DATA CENTER
WEATHER STATION 14710
MANCHESTER, NH
DATA PERIOD: 1999-2008

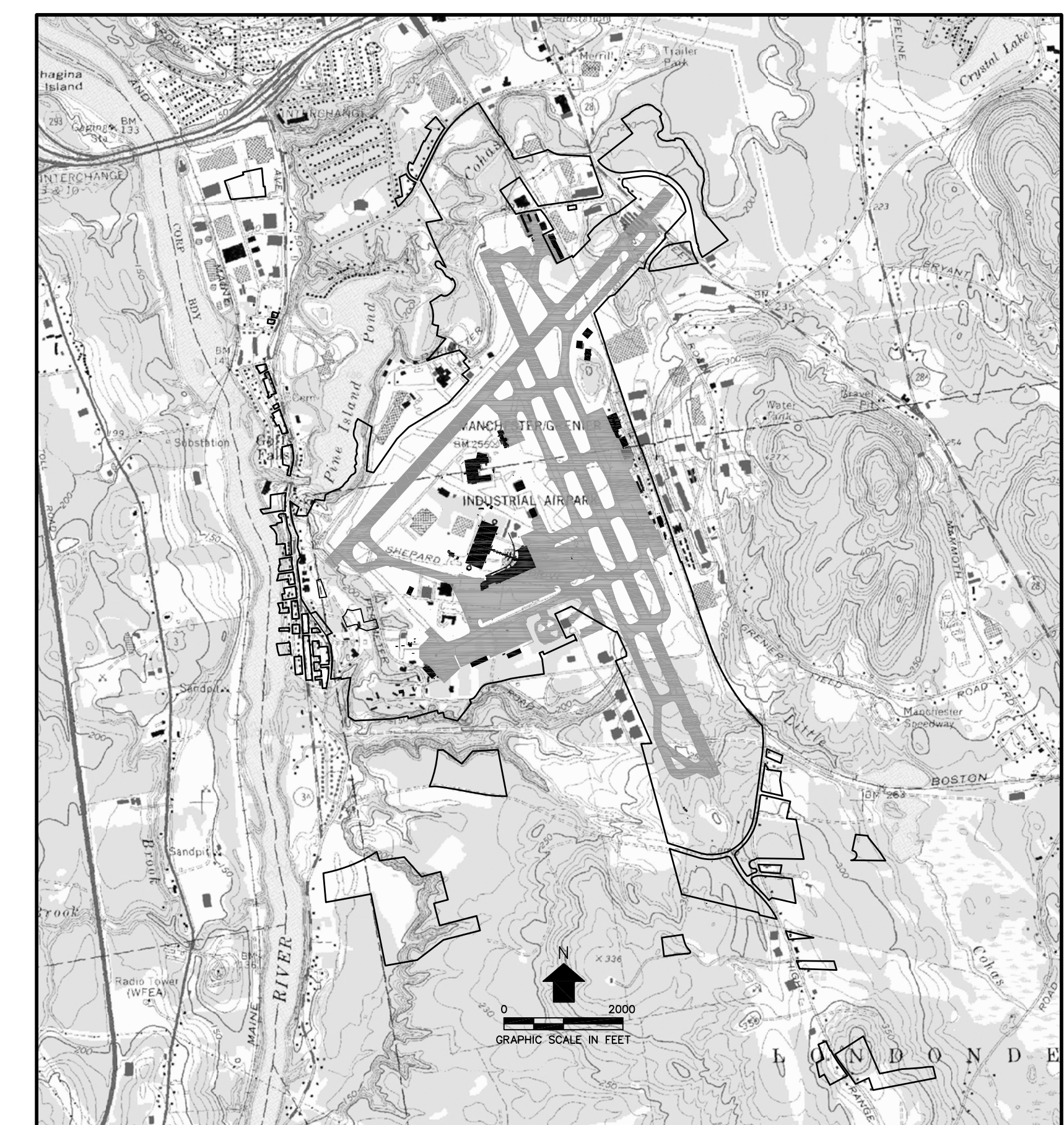


LOCATION MAP

INDEX OF DRAWINGS

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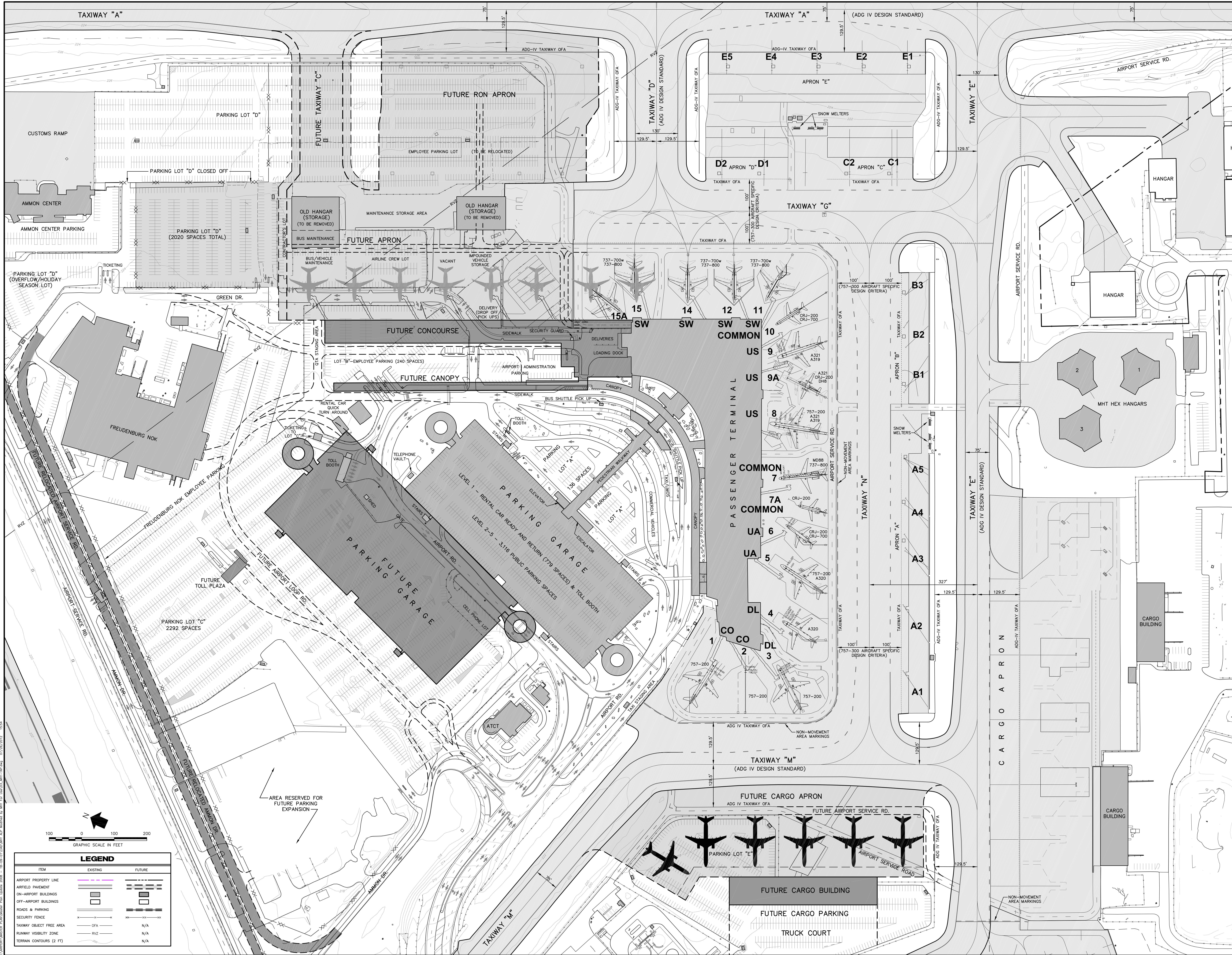
REFERENCE: FAA ADVISORY CIRCULARS:
AIRPORT DESIGN 150/5300-13 (CHANGE 17) 9/30/11
AIRPORT MASTER PLANS 150/5070-6B (CHANGE 1) 5/1/07



VICINITY MAP

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TERMINAL AREA PLAN

MANCHESTER-BOSTON REGIONAL AIRPORT MANCHESTER, NEW HAMPSHIRE

PREPARED FOR
CITY OF MANCHESTER
DEPARTMENT OF AVIATION
MANCHESTER, NEW HAMPSHIRE

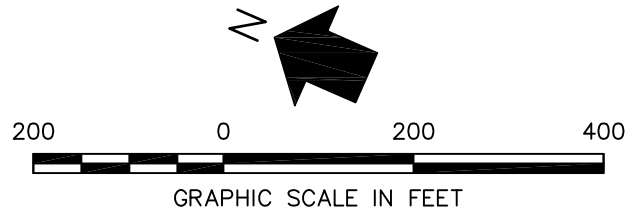
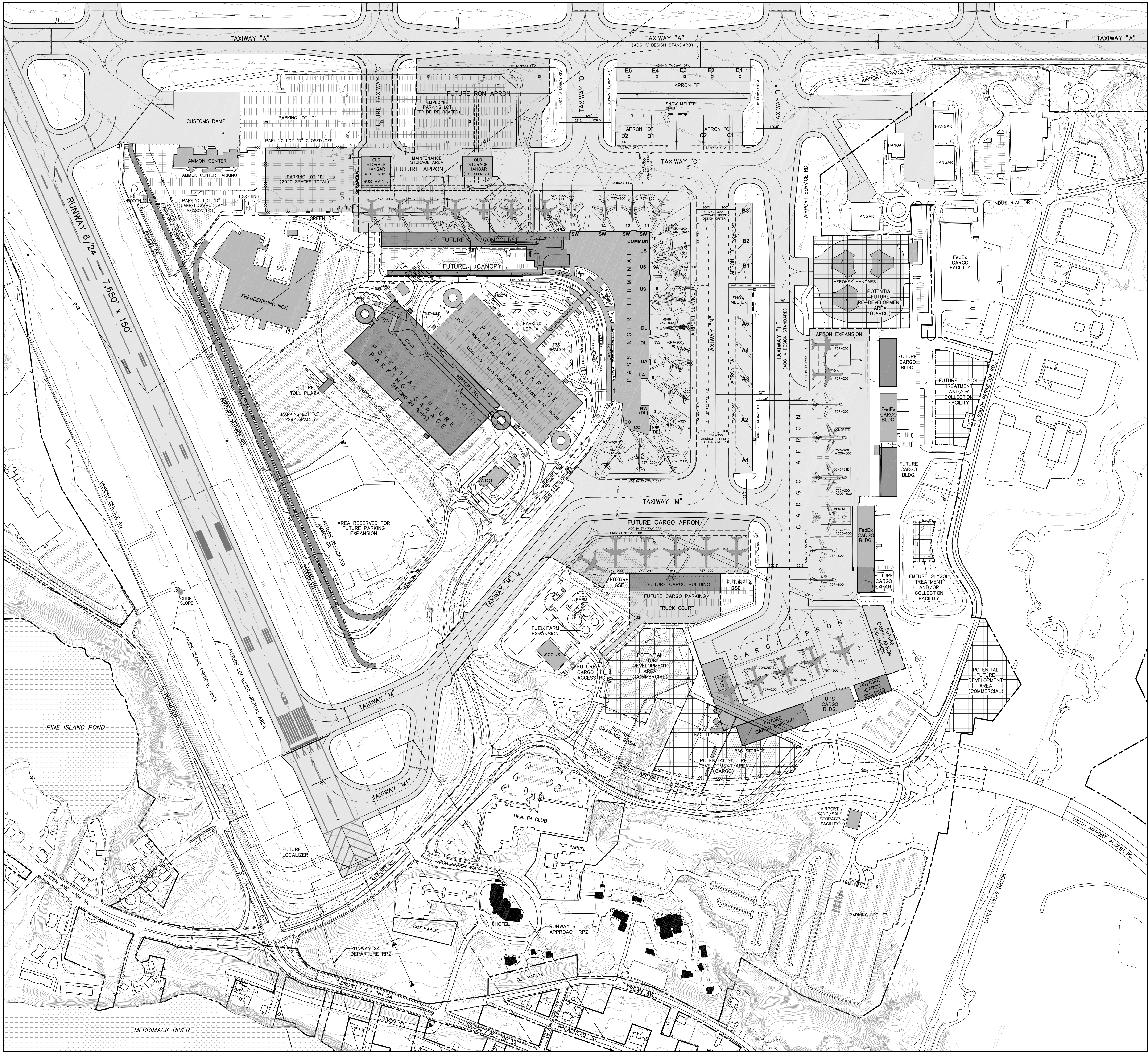
DESIGNED: RJM
DRAWN: RJM
PROJECT MANAGER: FMN
PROJECT DIRECTOR: FMN

DATE: 9/11
SHEET: 3 OF 20

URS Corporation
7600 West County
Tampa, FL 33607-1462
PH: 813.286.1111

Manchester-Boston
Regional Airport

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NOTE:

1. ALTHOUGH NOT SPECIFICALLY DEPICTED, NO FUTURE BUILDINGS SHOULD BE CONSTRUCTED WITHIN THE DEFINED LIMITS OF THE RUNWAY PROTECTION ZONES (RPZ), RUNWAY OBJECT FREE AREAS (ROFA), TAXIWAY OBJECT FREE AREAS (TOFA), TAXIWAY VISIBILITY ZONES (TVZ), TAXIWAY CRITICAL AREAS (TCA), TAXIWAY REQUIRED FOR TERPS AND AIRPORT TRAFFIC CONTROL TOWER LINE OF SIGHT.

LEGEND

ITEM	EXISTING	FUTURE
AIRPORT PROPERTY LINE	---	---
AIRFIELD PAVEMENT	---	---
ON-AIRPORT BUILDINGS	■	■
OFF-AIRPORT BUILDINGS	■	N/A
BUILDINGS TO BE REMOVED	N/A	■
DEVELOPMENT AREA	N/A	■
PAVEMENT (ROADS/PARKING)	N/A	■
ROADS & PARKING	---	---
SECURITY FENCE	---	---
TAXIWAY OBJECT FREE AREA	---	N/A
RUNWAY VISIBILITY ZONE	---	N/A
TERRAIN CONTOURS (2 FT)	---	N/A

**TERMINAL/CARGO AREA
SITE PLAN**
**MANCHESTER-BOSTON REGIONAL AIRPORT
MANCHESTER, NEW HAMPSHIRE**

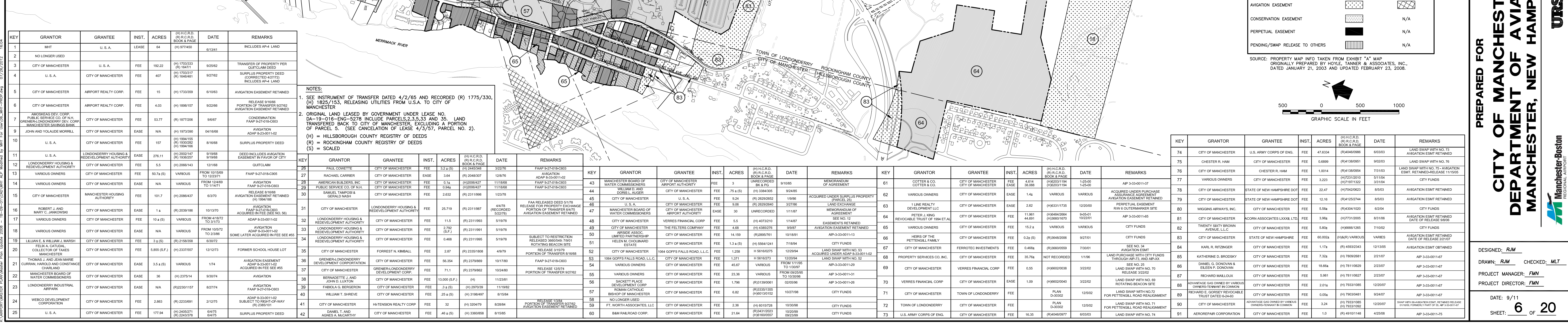
PREPARED FOR
CITY OF MANCHESTER
DEPARTMENT OF AVIATION
MANCHESTER, NEW HAMPSHIRE

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URS Corporation
7800 West Courtney
Tampa, FL 33607-1462
PH: 813.286.1111

Manchester-Boston
REGIONAL AIRPORT

DESIGNED: *RJM*
DRAWN: *RJM* CHECKED: *MLT*
PROJECT MANAGER: *FMV*
PROJECT DIRECTOR: *FMV*

DATE: 9/11
SHEET: **4** OF **20**





A graphic scale bar is shown below the map. It is marked with 4000, 0, 4000, and 8000 feet. Above the scale bar is a north arrow pointing upwards, labeled with an 'N'.

**PREPARED FOR
CITY OF MANCHESTER
DEPARTMENT OF AVIATION
MANCHESTER, NEW HAMPSHIRE**

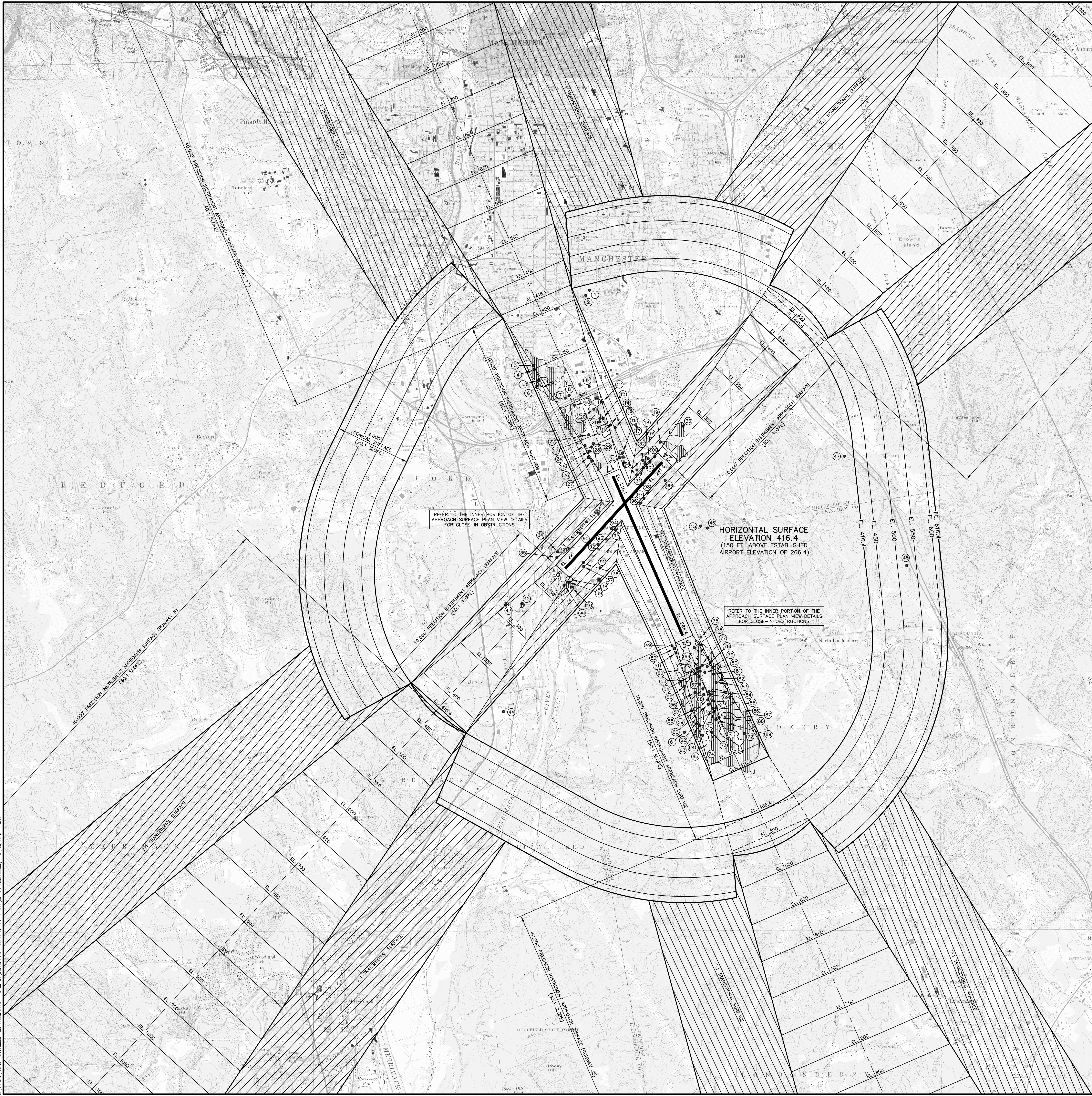


Manchester-Boston
REGIONAL AIRPORT

DATE: 9/11
SHEET: 7 OF 20

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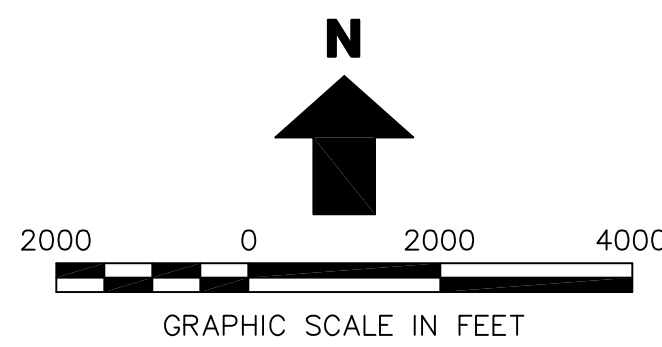
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OBSTACLE DATA TABLE						
NO.	DESCRIPTION	OBSTACLE ELEVATION (FEET MSL)	LOWEST AFFECTED SURFACE	PENETRATION (FEET)	RECOMMENDED ACTION	LIGHTED
1	TREE	423	HORIZONTAL	7	TRIM OR REMOVE	NO
2	TREE	418	HORIZONTAL	2	TRIM OR REMOVE	NO
3	UTILITY POLE	356	RW 17 APPROACH	2	LIGHT	NO
4	BUILDING	361	TRANSITIONAL	2	LIGHT	NO
5	TREE CLUSTER WITH HIGH POINT DEPICTED	422	TRANSITIONAL	61	TRIM OR REMOVE	NO
6	GROUND TOPO, BUILDINGS, UTILITY POLES	VARIES	RW 17 APPROACH	VARIES	LIGHT	NO
7	ANTENNA	331	RW 17 APPROACH	23	LIGHT	NO
8	TREE	311	RW 17 APPROACH	2	TRIM OR REMOVE	NO
9	TREE	314	RW 17 APPROACH	7	TRIM OR REMOVE	NO
10	TREE CLUSTER WITH HIGH POINT DEPICTED	331	RW 17 APPROACH	33	TRIM OR REMOVE	NO
11	BUILDING CHIMNEY	290	RW 17 APPROACH	5	LIGHT	NO
12	TREE	307	TRANSITIONAL	15	TRIM OR REMOVE	NO
13	TREE CLUSTER WITH HIGH POINT DEPICTED	282	RW 17 APPROACH	9	TRIM OR REMOVE	NO
14	TREE CLUSTER WITH HIGH POINT DEPICTED	286	RW 17 APPROACH	4	TRIM OR REMOVE	NO
15	TREE	310	TRANSITIONAL	6	TRIM OR REMOVE	NO
16	TREE CLUSTER WITH HIGH POINT DEPICTED	294	TRANSITIONAL	2	TRIM OR REMOVE	NO
17	TREE	265	TRANSITIONAL	-3	NONE	NO
18	TREE CLUSTER WITH HIGH POINT DEPICTED	322	TRANSITIONAL	64	TRIM OR REMOVE	NO
19	TREE CLUSTER WITH HIGH POINT DEPICTED	287	TRANSITIONAL	5	TRIM OR REMOVE	NO
20	TREE CLUSTER WITH HIGH POINT DEPICTED	302	RW 17 APPROACH	17	TRIM OR REMOVE	NO
21	BUILDING	272	RW 17 APPROACH	1	LIGHT	NO
22	LIGHT POLE	264	RW 17 APPROACH	23	LIGHT	NO
23	LIGHT/UTILITY POLES (29)	VARIES	RW 17 APPROACH	VARIES	LIGHT	NO
24	UTILITY POLES (3)	256-268	RW 17 APPROACH	2-14	LIGHT	NO
25	UTILITY POLE	261	RW 17 APPROACH	15	LIGHT	NO
26	TREE CLUSTER WITH HIGH POINT DEPICTED	262	TRANSITIONAL	4	TRIM OR REMOVE	NO
27	BUILDING, UTILITY POLE	249, 253	TRANSITIONAL	6, 10	LIGHT	NO
28	UTILITY POLE	259	RW 17 APPROACH	10	LIGHT	NO
29	UTILITY POLE	265	RW 17 APPROACH	13	LIGHT	NO
30	TREE	251	TRANSITIONAL	7	TRIM OR REMOVE	NO
31	GROUND TOPO	246, 257	TRANSITIONAL	31, 13	REGRADE	NO
32	ANTENNA	306	TRANSITIONAL	17	LIGHT	NO
33	TREE CLUSTER WITH HIGH POINT DEPICTED	306	RW 24 APPROACH	26	TRIM OR REMOVE	NO
34	TREE CLUSTER WITH HIGH POINT DEPICTED	282	TRANSITIONAL	2	TRIM OR REMOVE	NO
35	TREE	266	TRANSITIONAL	11	TRIM OR REMOVE	NO
36	TREE CLUSTER WITH HIGH POINT DEPICTED	232	PRIMARY	10	TRIM OR REMOVE	NO
37	TREE	243	TRANSITIONAL	1	TRIM OR REMOVE	NO
38	LIGHT/UTILITY POLES (3)	224-232	RW 6 APPROACH	2-5	LIGHT	NO
39	BUILDING	260	TRANSITIONAL	23	LIGHT	NO
40	TREE CLUSTER WITH HIGH POINT DEPICTED	305	TRANSITIONAL	25	TRIM OR REMOVE	NO
41	BUILDING	234	RW 6 APPROACH	3	LIGHT	NO
42	TREE CLUSTER WITH HIGH POINT DEPICTED	265	RW 6 APPROACH	10	TRIM OR REMOVE	NO
43	TREE CLUSTER WITH HIGH POINT DEPICTED	309	RW 6 APPROACH	13	TRIM OR REMOVE	NO
44	ANTENNA	543	HORIZONTAL	127	LIGHT	NO
45	TANK	437	HORIZONTAL	21	NONE	YES
46	TOWER	502	HORIZONTAL	84	NONE	YES
47	TOWER	433	HORIZONTAL	17	NONE	YES
48	TOWER	543	CONICAL	19	NONE	YES
49	GROUND/PAVEMENT TOPO, UTILITY STRUCTURES, FENCE	VARIES	RW 35 APPROACH	VARIES	LIGHT	NO
50	BUILDING	294	TRANSITIONAL	1	LIGHT	NO
51	BUILDING, 2 ANTENNAS	296,316,321	TRANSITIONAL	2, 22, 27	LIGHT	NO
52	BUILDING, UTILITY/UTILITY POLES, FENCE, SIGNS	VARIES	RW 35 APPROACH	VARIES	LIGHT	NO
53	BUILDING	316	RW 35 APPROACH	16	LIGHT	NO
54	GROUND/PAVEMENT TOPO, UTILITY/UTILITY POLES, FENCE, SIGNS	VARIES	RW 35 APPROACH	VARIES	LIGHT	NO
55	BUILDING	344	TRANSITIONAL	13	LIGHT	NO
56	BUILDING	337	RW 35 APPROACH	4	LIGHT	NO
57	BUILDING	337	RW 35 APPROACH	14	LIGHT	NO
58	BUILDING	363	RW 35 APPROACH	23	LIGHT	NO
59	BUILDING	347	RW 35 APPROACH	11	LIGHT	NO
60	BUILDING	355	RW 35 APPROACH	15	LIGHT	NO
61	BUILDING	432	HORIZONTAL	16	LIGHT	NO
62	BUILDINGS, UTILITY/UTILITY POLES	VARIES	RW 35 APPROACH	VARIES	LIGHT	NO
63	BUILDING	371	RW 35 APPROACH	14	LIGHT	NO
64	BUILDING	375	RW 35 APPROACH	29	LIGHT	NO
65	BUILDING	370	RW 35 APPROACH	2	LIGHT	NO
66	BUILDING	330	RW 35 APPROACH	34	LIGHT	NO
67	BUILDING	330	RW 35 APPROACH	13	LIGHT	NO
68	BUILDING	344	RW 35 APPROACH	15	LIGHT	NO
69	BUILDING	351	RW 35 APPROACH	20	LIGHT	NO
70	BUILDING	354	RW 35 APPROACH	5	LIGHT	NO
71	BLOGS, GROUND/PAVEMENT TOPO, UTILITY/UTILITY POLES, SIGNS, FENCE	VARIES	RW 35 APPROACH	VARIES	LIGHT	NO
72	TREE CLUSTER WITH HIGH POINT DEPICTED	473	RW 35 APPROACH	89	TRIM OR REMOVE	NO
73	BUILDING	373	RW 35 APPROACH	4	LIGHT	NO
74	UTILITY/UTILITY POLES (9)	VARIES	RW 35 APPROACH	VARIES	LIGHT	NO
75	TREE	327	TRANSITIONAL	10	TRIM OR REMOVE	NO
76	BUILDING	283	RW 35 APPROACH	4	FIXED BY FUNCTION	NO
77	BUILDING	326	RW 35 APPROACH	26	LIGHT	NO
78	BUILDING	338	RW 35 APPROACH	35	LIGHT	NO
79	BUILDING	337	RW 35 APPROACH	31	LIGHT	NO
80	BUILDING	343	RW 35 APPROACH	35	LIGHT	NO
81	BUILDING	336	RW 35 APPROACH	23	LIGHT	NO
82	BUILDING	354	TRANSITIONAL	1	LIGHT	NO
83	BUILDING	348	RW 35 APPROACH	26	LIGHT	NO
84	BUILDING	357	RW 35 APPROACH	29	LIGHT	NO
85	BUILDING	366	RW 35 APPROACH	28	LIGHT	NO
86	BUILDING	362	RW 35 APPROACH	15	LIGHT	NO
87	PAVEMENT TOPO	VARIES	RW 35 APPROACH	VARIES	NONE	NO
88	BUILDING	365	RW 35 APPROACH	8	LIGHT	NO
89	BUILDING	378	RW 35 APPROACH	18	LIGHT	NO
90	BUILDING	253	TRANSITIONAL	3	LIGHT	NO
91	AIRPORT TRAFFIC CONTROL TOWER	382	TRANSITIONAL	39	NONE	YES
92	TOLL CANOPY	236	PRIMARY	10	REMOVE	NO
93	BUILDING	290	TRANSITIONAL	25	LIGHT	NO
94	TOLL BUILDINGS	233	PRIMARY	4	REMOVE	NO
95	BUILDING	251	TRANSITIONAL	11	LIGHT	NO
96	BUILDING	260	TRANSITIONAL	9	LIGHT	NO
97	BUILDING	261	TRANSITIONAL	13	LIGHT	NO
98	BUILDING	266	TRANSITIONAL	26	LIGHT	NO
99	BUILDING	260	TRANSITIONAL	1	LIGHT	NO
100	BUILDING	266	PRIMARY	25	LIGHT	NO
101	BUILDING	269	TRANSITIONAL	4	LIGHT	NO
102	SHED	263	PRIMARY	23	REMOVE	NO
103	BUILDING	251	TRANSITIONAL	7	LIGHT	NO

SOURCES:
BASE MAP: USGS 7.5' QUADRANGLE MAPS
OBSTACLE DATA: FEDERAL AVIATION ADMINISTRATION DIGITAL AERONAUTICAL INFORMATION DIGITAL OBSTACLE FILE EFFECTIVE JUNE, 2010
HOYLE, TANNER & ASSOC., INC., OBSTRUCTION ANALYSIS, DATED SEPTEMBER, 2009.

LEGEND
 AREA OF TREE PENETRATION WITHIN CTR PART 77
MAGNIFY SURFACE: AREA DEFINED DOES NOT REPRESENT EXACT SHAPE OF TREE PENETRATIONS, ONLY WHERE THEY CAN BE FOUND, WITHIN EACH AREA A HIGH POINT IS DEPICTED WITH A POINT AND OBSTRUCTION NUMBER.
 AREA OF MISC. OBJECT PENETRATION (I.E. POLES, SIGNS, FENCES, BUILDINGS, GROUND, ETC.)



DESIGNED: RJM
DRAWN: RJM CHECKED: MLT
PROJECT MANAGER: FMN
PROJECT DIRECTOR: FMN

DATE: 9/11
SHEET: 8 OF 20

PREPARED FOR
CITY OF MANCHESTER
DEPARTMENT OF AVIATION
MANCHESTER, NEW HAMPSHIRE

URS
URS Corporation
7600 West Courtney
Tampa, FL 33607-1462
PH: 813.286.1111

AIRPORT AIRSPACE PLAN
(INNER PORTION)

MANCHESTER-BOSTON REGIONAL AIRPORT
MANCHESTER, NEW HAMPSHIRE

NO. _____

BY _____ DATE _____

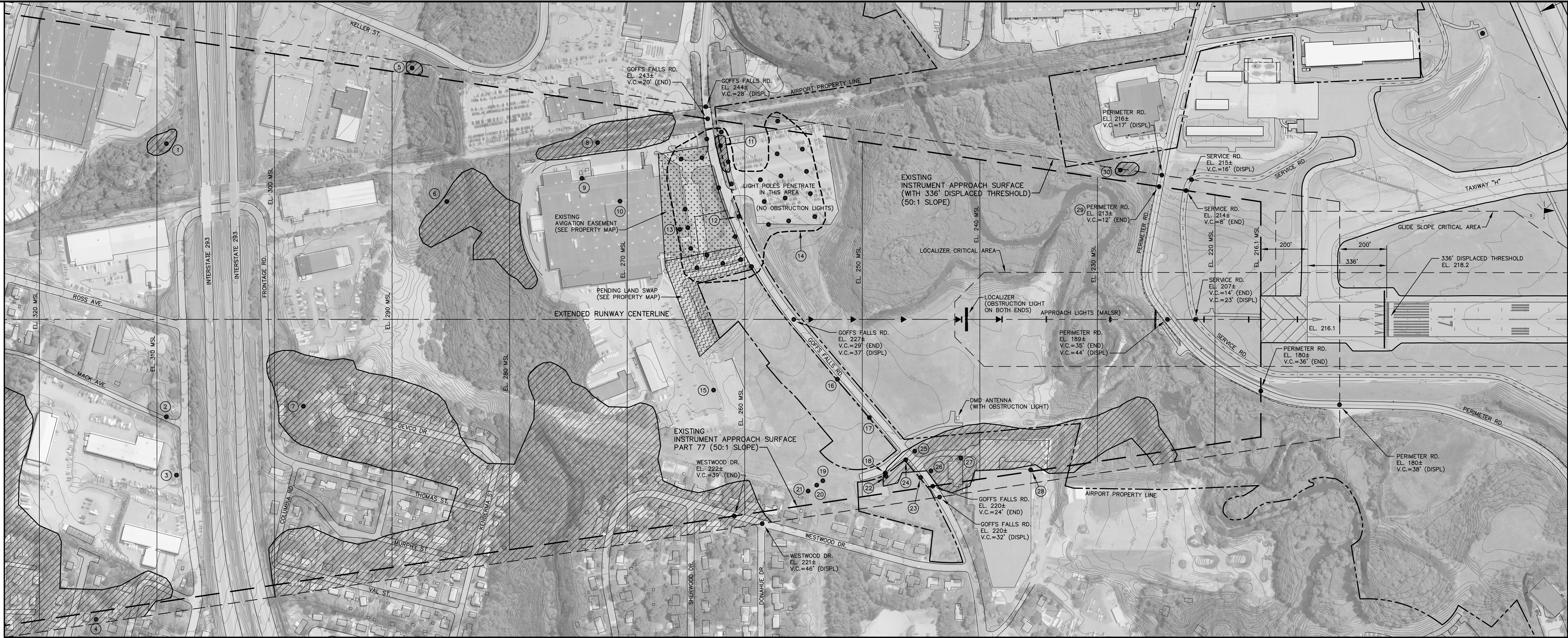
REVISIONS _____

NO. _____

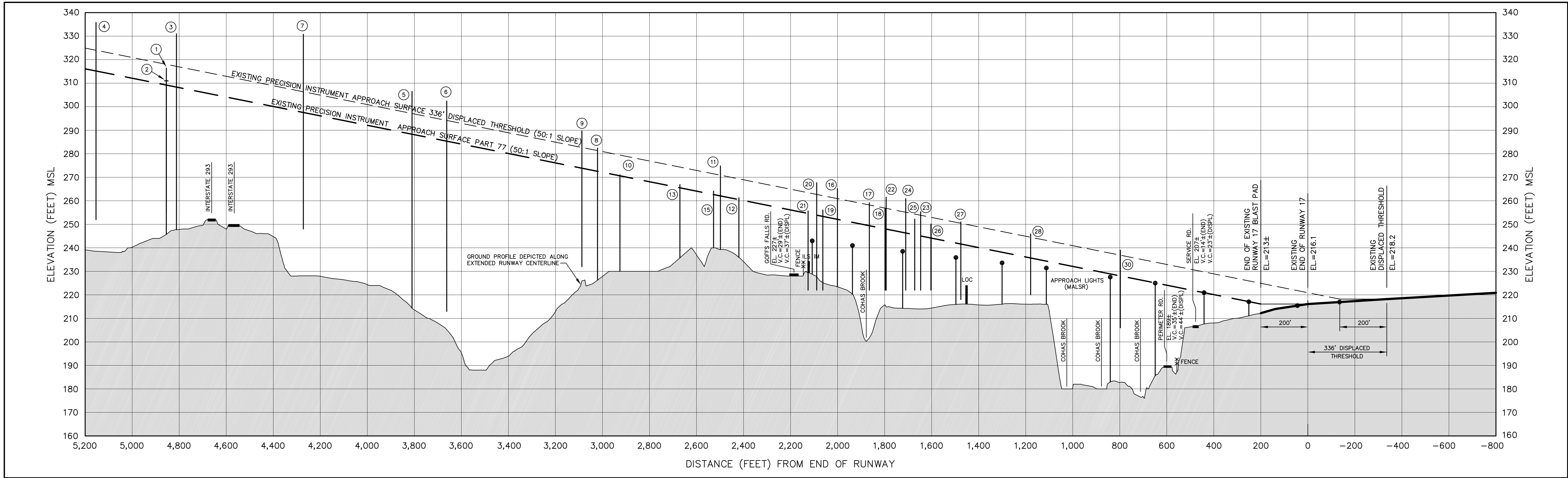
BY _____ DATE _____

REVISIONS _____

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RUNWAY 17 INNER PORTION OF THE APPROACH SURFACE PLAN VIEW



RUNWAY 17 INNER PORTION OF THE APPROACH SURFACE PROFILE VIEW

OBSTACLE DATA TABLE													
NO.	DESCRIPTION	OBSTACLE ELEVATION (FEET) (MSL)	LOWEST AFFECTED SURFACE	PENETRATION (FEET)	RECOMMENDED ACTION	LIGHTED	NO.	DESCRIPTION	OBSTACLE ELEVATION (FEET) (MSL)	LOWEST AFFECTED SURFACE	PENETRATION (FEET)	RECOMMENDED ACTION	LIGHTED
1	TREE CLUSTER WITH HIGH POINT DEPICTED	316	RW 17 APPROACH	7	TRIM OR REMOVE	NO	16	UTILITY POLE	257	RW 17 APPROACH/DISPLACED APPROACH	13/4	LIGHT	NO
2	TREE	311	RW 17 APPROACH	2	TRIM OR REMOVE	NO	17	UTILITY POLE	259	RW 17 APPROACH/DISPLACED APPROACH	10/1	LIGHT	NO
3	TREE	331	RW 17 APPROACH/DISPLACED APPROACH	23/14	TRIM OR REMOVE	NO	18	UTILITY POLE	259	RW 17 APPROACH	9	LIGHT	NO
4	TREE	336	RW 17 DISPLACED APPROACH	12	TRIM OR REMOVE	NO	19	UTILITY POLE	259	RW 17 APPROACH	3	LIGHT	NO
5	TREE CLUSTER WITH HIGH POINT DEPICTED	307	RW 17 DISPLACED APPROACH	10	TRIM OR REMOVE	NO	20	UTILITY POLE	258	RW 17 APPROACH/DISPLACED APPROACH	14/5	LIGHT	NO
6	TREE CLUSTER WITH HIGH POINT DEPICTED	302	RW 17 APPROACH/DISPLACED APPROACH	17/8	TRIM OR REMOVE	NO	21	UTILITY POLE	258	RW 17 APPROACH	1	LIGHT	NO
7	TREE CLUSTER WITH HIGH POINT DEPICTED	331	RW 17 APPROACH/DISPLACED APPROACH	33/25	TRIM OR REMOVE	NO	22	TREE CLUSTER WITH HIGH POINT DEPICTED	262	RW 17 APPROACH/DISPLACED APPROACH	14/5	TRIM OR REMOVE	NO
8	TREE CLUSTER WITH HIGH POINT DEPICTED	282	RW 17 APPROACH/DISPLACED APPROACH	9/1	TRIM OR REMOVE	NO	23	UTILITY POLE	255	RW 17 APPROACH/DISPLACED APPROACH	10/1	LIGHT	NO
9	BUILDING CHIMNEY	290	RW 17 APPROACH/DISPLACED APPROACH	16/7	LIGHT	NO	24	UTILITY POLE	261	RW 17 APPROACH/DISPLACED APPROACH	15/6	LIGHT	NO
10	BUILDING	272	RW 17 APPROACH	1	LIGHT	NO	25	UTILITY POLE	252	RW 17 APPROACH	6	LIGHT	NO
11	TREE CLUSTER WITH HIGH POINT DEPICTED	275	RW 17 APPROACH/DISPLACED APPROACH	13/4	TRIM OR REMOVE	NO	26	UTILITY POLE	250	RW 17 APPROACH	6	LIGHT	NO
12	TREE	281	RW 17 APPROACH	1	TRIM OR REMOVE	NO	27	UTILITY POLE	251	RW 17 APPROACH/DISPLACED APPROACH	9/1	LIGHT	NO
13	TREE	267	RW 17 APPROACH	1	TRIM OR REMOVE	NO	28	BUILDING	246	RW 17 APPROACH/DISPLACED APPROACH	10/2	LIGHT	NO
14	21 LIGHT POLES, 7 UTILITY POLES	256-282	RW 17 APPROACH	1-19	LIGHT	NO	29	PERIMETER ROAD	213	RW 17 APPROACH	3	NONE	NO
15	LIGHT POLE	264	RW 17 APPROACH	1	LIGHT	NO	30	TREE CLUSTER WITH HIGH POINT DEPICTED	239	RW 17 DISPLACED APPROACH	2	TRIM OR REMOVE	NO

LEGEND

AREA OF TREE PENETRATION WITHIN CPT PART 77 APPROACH SURFACES. AREA DEFINED DOES NOT REPRESENT EXACT SHAPE OF TREE PENETRATIONS, ONLY WHERE THEY CAN BE FOUND. WITHIN EACH AREA A HIGH POINT IS DEPICTED WITH A POINT AND OBSTRUCTION NUMBER.

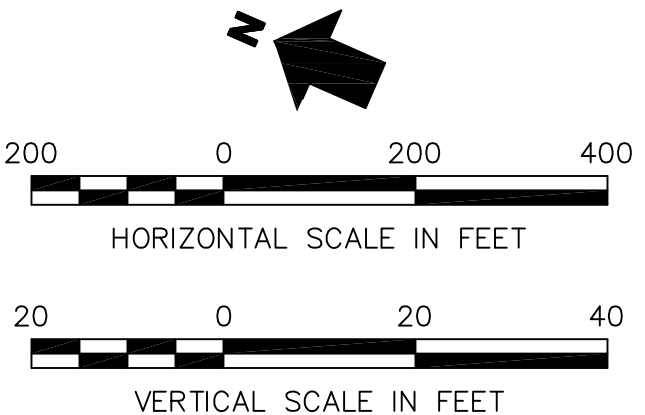
AREA OF MISC. OBJECT PENETRATIONS (I.E. UTILITY/LIGHT POLES)

SOURCES:

BASE MAP: AERIAL PHOTOGRAPH PROVIDED BY MANCHESTER-BOSTON REGIONAL AIRPORT, DATED 2009

OBSTACLE DATA: FEDERAL AVIATION ADMINISTRATION DIGITAL AERONAUTICAL INFORMATION DIGITAL OBSTACLE FILE EFFECTIVE JUNE, 2010.

HOLE, TANNER & ASSOC., INC., OBSTRUCTION ANALYSIS, DATED SEPTEMBER, 2009.



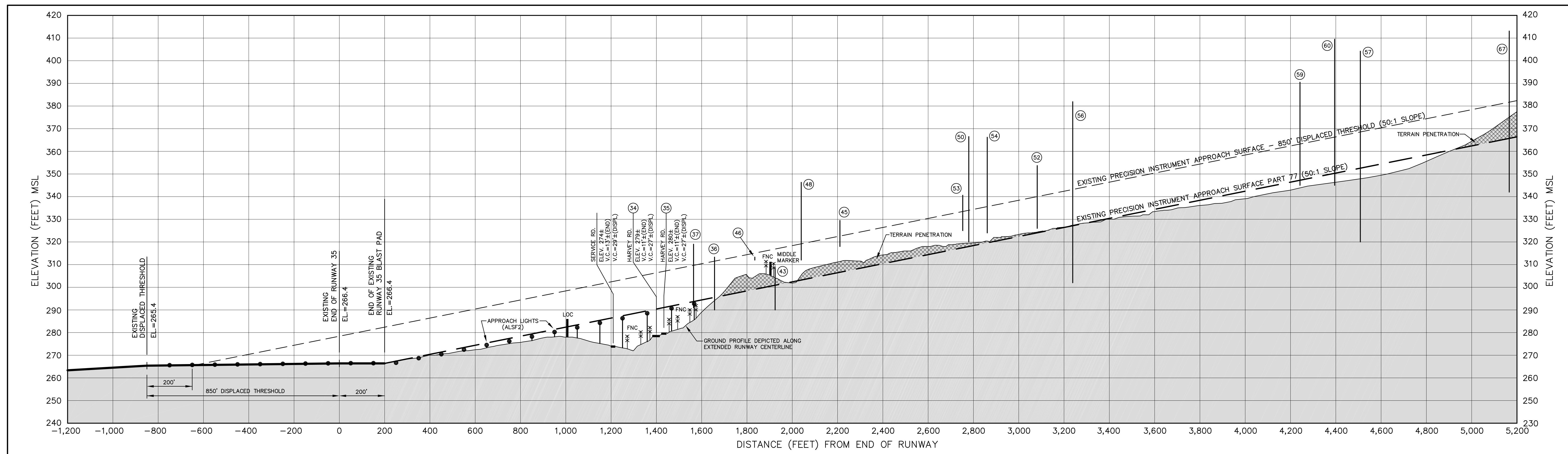
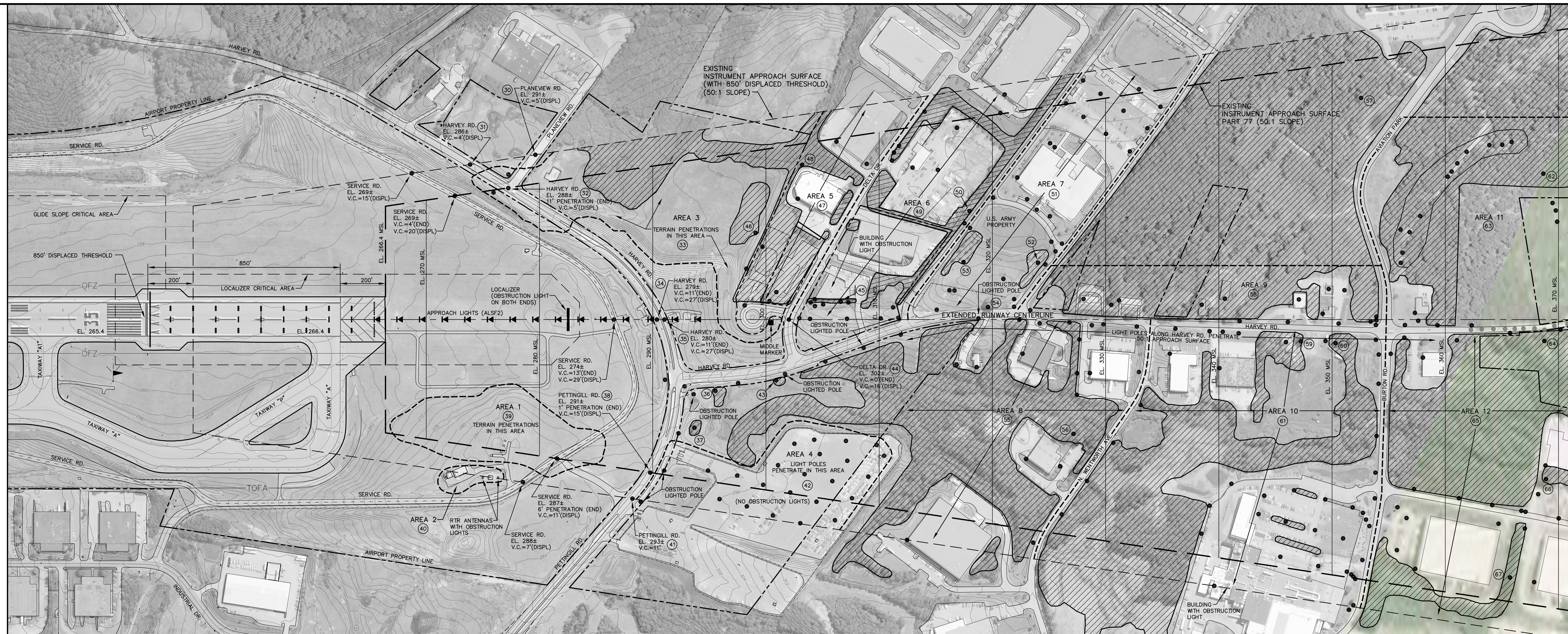
INNER PORTION OF THE APPROACH SURFACE DRAWING - RUNWAY 17
MANCHESTER-BOSTON REGIONAL AIRPORT
MANCHESTER, NEW HAMPSHIRE



PREPARED FOR
CITY OF MANCHESTER
DEPARTMENT OF AVIATION
MANCHESTER, NEW HAMPSHIRE

URS Corporation Southern
7650 West Courtney
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PH: (813) 286-1111

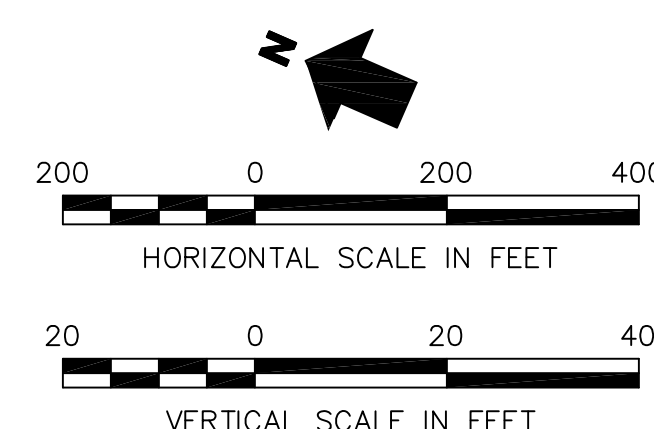
Manchest-Boston
Regional Airport

DESIGNED: R/M
DRAWN: R/M CHECKED: M/LT
PROJECT MANAGER: FMN
PROJECT DIRECTOR: FMN
DATE: 9/11
SHEET: 9 OF 20



LEGEND	
	AREA OF TREE PENETRATION WITHIN CFR PART 77 APPROACH SURFACES. AREA DEFINED DOES NOT REPRESENT EXACT SHAPE OF TREE PENETRATIONS, ONLY WHERE THEY CAN BE FOUND. WITHIN EACH AREA A HIGH POINT IS DEPICTED WITH A POINT AND OBSTRUCTION NUMBER.
	AREA OF MISC. OBJECT PENETRATIONS (I.E. POLES, SIGNS, FENCES, BUILDINGS, GROUND, ETC.)

OBSTACLE DATA TABLE													
NO.	DESCRIPTION	OBSTACLE ELEVATION (FEET) (MSL)	LOWEST AFFECTED SURFACE	PENETRATION (FEET)	RECOMMENDED ACTION	LIGHTED	NO.	DESCRIPTION	OBSTACLE ELEVATION (FEET) (MSL)	LOWEST AFFECTED SURFACE	PENETRATION (FEET)	RECOMMENDED ACTION	LIGHTED
30	FLANERMAN ROAD	291	RW 35 DISPLACED APPROACH	10	NONE	NO	43	TREE CLUSTER WITH HIGH POINT DEPECTED	309	RW 35 APPROACH	8	TRIM OR REMOVE	NO
31	HARVEY ROAD	289	RW 35 DISPLACED APPROACH	11	NONE	NO	44	DELTA DRIVE	309	RW 35 APPROACH	8	TRIM OR REMOVE	NO
32	HARVEY ROAD	289	RW 35 DISPLACED APPROACH	26/10	NONE	NO	45	TREE CLUSTER WITH HIGH POINT DEPECTED	309	RW 35 APPROACH/DISPLACED APPROACH	23/7	NONE	NO
33	AREA 5-TOP, FINE HYDRANT, SIGN BY FLANERMAN	289	RW 35 DISPLACED APPROACH	VARIES	NONE	NO	46	TREE CLUSTER WITH HIGH POINT DEPECTED	313	RW 35 APPROACH	14	TRIM OR REMOVE	NO
34	HARVEY ROAD	279	RW 35 APPROACH	4	NONE	NO	47	AREA 5-BLUGS, LIGHT/UTL, POLES, SIGNS, FENCE	VARIES	RW 35 APPROACH/DISPLACED APPROACH	VARIES	LIGHT	NO
35	HARVEY ROAD	286	RW 35 APPROACH	NO	NO	48	TREE CLUSTER WITH HIGH POINT DEPECTED	315	RW 35 APPROACH/DISPLACED APPROACH	43/27	TRIM OR REMOVE	NO	
36	TRIE CLUSTER WITH HIGH POINT DEPECTED	313	RW 35 APPROACH/DISPLACED APPROACH	17/1	TRIM OR REMOVE	NO	49	AREA 4-BLUGS, LIGHT/UTL, POLES, SIGNS, FENCE	VARIES	RW 35 APPROACH/DISPLACED APPROACH	43/27	LIGHT	NO
37	TRIE CLUSTER WITH HIGH POINT DEPECTED	319	RW 35 APPROACH/DISPLACED APPROACH	26/9	TRIM OR REMOVE	NO	50	TREE CLUSTER WITH HIGH POINT DEPECTED	367	RW 35 APPROACH/DISPLACED APPROACH	40/34	TRIM OR REMOVE	NO
38	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 APPROACH	NO	NONE	NO	51	AREA 4-BLUGS, LIGHT/UTL, POLES, SIGNS, FENCE	VARIES	RW 35 APPROACH/DISPLACED APPROACH	43/27	LIGHT	NO
39	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 APPROACH	NO	NONE	NO	52	TREE CLUSTER WITH HIGH POINT DEPECTED	354	RW 35 APPROACH/DISPLACED APPROACH	39/73	TRIM OR REMOVE	NO
40	AREA 2-(2) BLDGS, 2 CRT ANTENNAS	293	RW 35 DISPLACED APPROACH	VARIES	FIXED BY FUNCTION	YES	53	TREE CLUSTER WITH HIGH POINT DEPECTED	341	RW 35 APPROACH/DISPLACED APPROACH	24/30	TRIM OR REMOVE	NO
41	PETTHAL ROAD	263	RW 35 DISPLACED APPROACH	26	NONE	NO	54	TREE CLUSTER WITH HIGH POINT DEPECTED	368	RW 35 APPROACH/DISPLACED APPROACH	46/38	TRIM OR REMOVE	NO
42	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 APPROACH/DISPLACED APPROACH	VARIES	NONE	NO	55	AREA 4-BLUGS, LIGHT/UTL, POLES, SIGNS, FENCE	VARIES	RW 35 APPROACH/DISPLACED APPROACH	VARIES	LIGHT	NO
43	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 DISPLACED APPROACH	VARIES	FIXED BY FUNCTION	YES	56	TREE CLUSTER WITH HIGH POINT DEPECTED	415	RW 35 APPROACH/DISPLACED APPROACH	46/30	TRIM OR REMOVE	NO
44	PETTHAL ROAD	263	RW 35 DISPLACED APPROACH	26	NONE	NO	57	TREE CLUSTER WITH HIGH POINT DEPECTED	415	RW 35 APPROACH/DISPLACED APPROACH	47/31	TRIM OR REMOVE	NO
45	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 DISPLACED APPROACH	VARIES	FIXED BY FUNCTION	YES	58	TREE CLUSTER WITH HIGH POINT DEPECTED	382	RW 35 APPROACH/DISPLACED APPROACH	55/39	TRIM OR REMOVE	NO
46	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 DISPLACED APPROACH	VARIES	FIXED BY FUNCTION	YES	59	TREE CLUSTER WITH HIGH POINT DEPECTED	404	RW 35 APPROACH/DISPLACED APPROACH	51/25	TRIM OR REMOVE	NO
47	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 DISPLACED APPROACH	VARIES	FIXED BY FUNCTION	YES	60	TREE CLUSTER WITH HIGH POINT DEPECTED	410	RW 35 APPROACH/DISPLACED APPROACH	60/14	TRIM OR REMOVE	NO
48	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 DISPLACED APPROACH	VARIES	FIXED BY FUNCTION	YES	61	AREA 10-TOP, BLDGS, LIGHT/UTL, POLES, FENCE	VARIES	RW 35 APPROACH/DISPLACED APPROACH	VARIES	LIGHT	NO
49	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 DISPLACED APPROACH	VARIES	FIXED BY FUNCTION	YES	62	TREE CLUSTER WITH HIGH POINT DEPECTED	444	RW 35 APPROACH/DISPLACED APPROACH	75/59	TRIM OR REMOVE	NO
50	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 DISPLACED APPROACH	VARIES	FIXED BY FUNCTION	YES	63	AREA 11-TOP, BLDGS, LIGHT/UTL, POLES	VARIES	RW 35 APPROACH/DISPLACED APPROACH	VARIES	LIGHT	NO
51	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 DISPLACED APPROACH	VARIES	FIXED BY FUNCTION	YES	64	TREE CLUSTER WITH HIGH POINT DEPECTED	415	RW 35 APPROACH/DISPLACED APPROACH	47/31	TRIM OR REMOVE	NO
52	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 DISPLACED APPROACH	VARIES	FIXED BY FUNCTION	YES	65	AREA 10-TOP, BLDGS, LIGHT/UTL, POLES	VARIES	RW 35 APPROACH/DISPLACED APPROACH	VARIES	LIGHT	NO
53	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 DISPLACED APPROACH	VARIES	FIXED BY FUNCTION	YES	66	TREE CLUSTER WITH HIGH POINT DEPECTED	415	RW 35 APPROACH/DISPLACED APPROACH	47/31	TRIM OR REMOVE	NO
54	AREA 1-TOP, UTILITY STRUCTURES	293	RW 35 DISPLACED APPROACH	VARIES	FIXED BY FUNCTION	YES	67	TREE CLUSTER WITH HIGH POINT DEPECTED	415	RW 35 APPROACH/DISPLACED APPROACH	46/30	TRIM OR REMOVE	NO



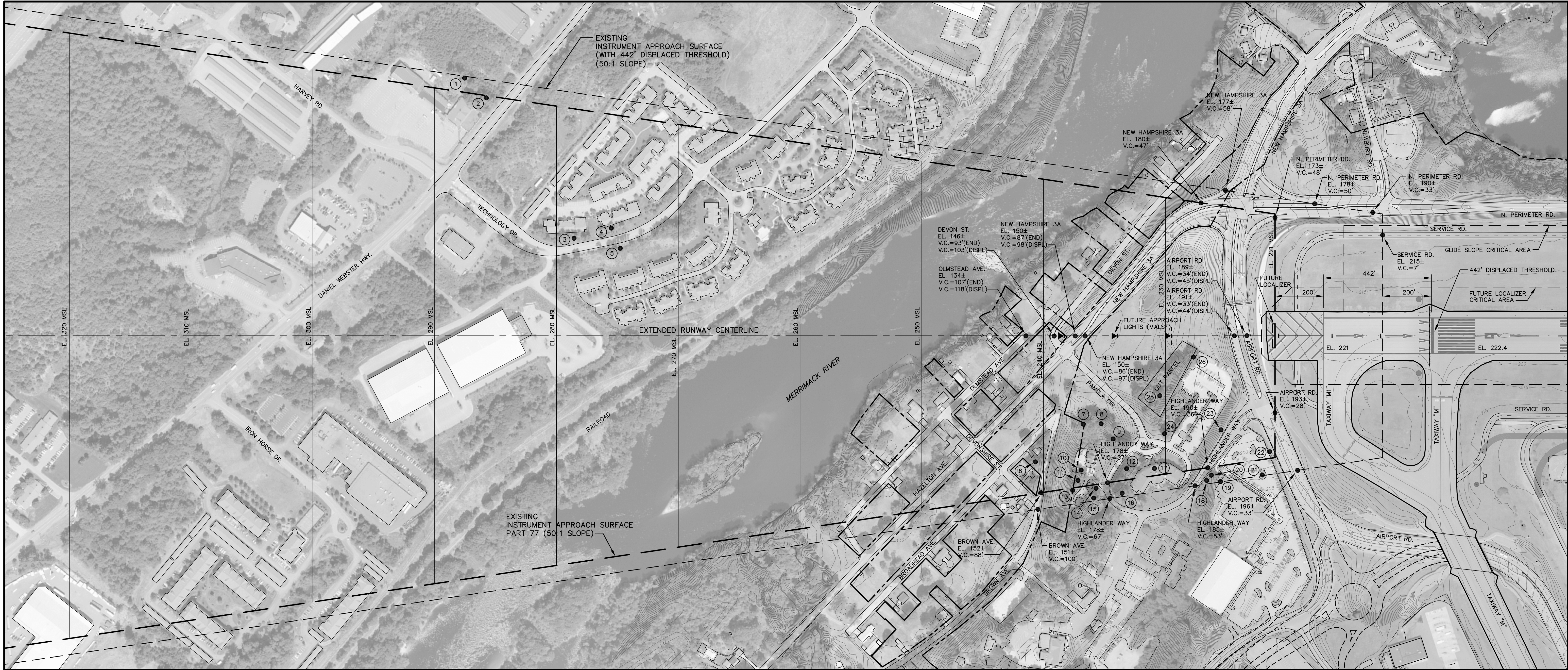
**INNER PORTION OF THE APPROACH
SURFACE DRAWING - RUNWAY 35**

PREPARED FOR
CITY OF MANCHESTER
DEPARTMENT OF AVIATION
MANCHESTER, NEW HAMPSHIRE

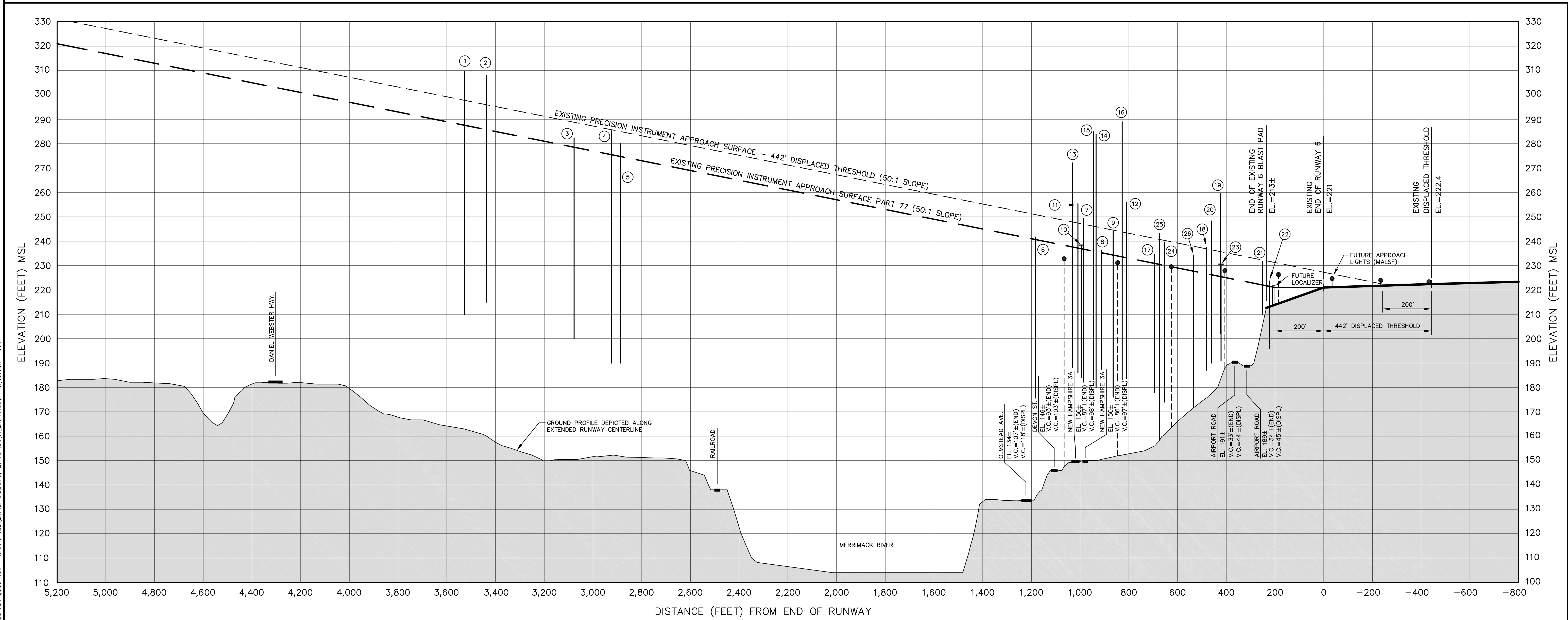
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URS Corporation
1955 Connecticut Avenue, Suite 200
Baltimore, MD 21206
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Fax: 410.386.7460

DESIGNED: RJM
DRAWN: RJM CHECKED: MLT
PROJECT MANAGER: FMN
PROJECT DIRECTOR: FMN

DATE: 9/11
SHEET: **10** OF **20**



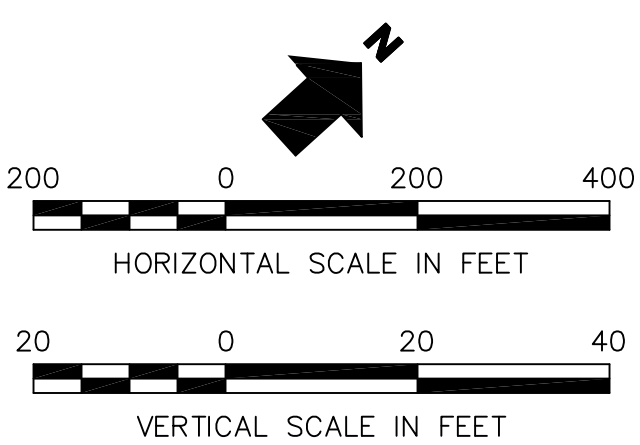
RUNWAY 6 INNER PORTION OF THE APPROACH SURFACE PLAN VIEW



RUNWAY 6 INNER PORTION OF THE APPROACH SURFACE PROFILE VIEW

OBSTACLE DATA TABLE					
NO.	DESCRIPTION	OBSTACLE ELEVATION (FEET) (MSL)	LOWEST APPROACHED SURFACE	PENETRATION (FEET)	RECOMMENDED ACTION
1	TREE	309	RW 6 DISP APPROACH	11	TRIM OR REMOVE
2	TREE	308	RW 6 DISP APPROACH	12	TRIM OR REMOVE
3	TREE	282	RW 6 DISP APPROACH	3	TRIM OR REMOVE
4	TREE	285	RW 6 DISP APPROACH	1	TRIM OR REMOVE
5	TREE	280	RW 6 DISP APPROACH	5	TRIM OR REMOVE
6	TREE	242	RW 6 DISP APPROACH	1	TRIM OR REMOVE
7	TREE	249	RW 6 DISP APPROACH	12	TRIM OR REMOVE
8	TREE	236	RW 6 DISP APPROACH	1	TRIM OR REMOVE
9	TREE	244	RW 6 DISP APPROACH	10	TRIM OR REMOVE
10	TREE	238	RW 6 DISP APPROACH	1	TRIM OR REMOVE
11	TREE	235	RW 6 DISP APPROACH	18	TRIM OR REMOVE
12	TREE	256	RW 6 DISP APPROACH	13	TRIM OR REMOVE
13	TREE	272	RW 6 DISP APPROACH	24	TRIM OR REMOVE
14	TREE	284	RW 6 DISP APPROACH	38	TRIM OR REMOVE
15	TREE	285	RW 6 DISP APPROACH	39	TRIM OR REMOVE
16	TREE	289	RW 6 DISP APPROACH	45	TRIM OR REMOVE
17	BUILDING	234	RW 6 DISP APPROACH	3	LIGHT
18	TREE	248	RW 6 DISP APPROACH	11	TRIM OR REMOVE
19	TREE	260	RW 6 DISP APPROACH	24	TRIM OR REMOVE
20	TREE	248	RW 6 DISP APPROACH	12	TRIM OR REMOVE
21	LIGHT POLE	232	RW 6 DISP APPROACH	0	NONE
22	LIGHT POLE	224	RW 6 DISP APPROACH	3	LIGHT
23	UTILITY POLE	231	RW 6 DISP APPROACH	6	LIGHT
24	TREE	239	RW 6 DISP APPROACH	9	TRIM OR REMOVE
25	TREE	243	RW 6 DISP APPROACH	13	TRIM OR REMOVE
26	TREE	234	RW 6 DISP APPROACH	6	TRIM OR REMOVE

SOURCES:
BASIC MAP: AERIAL PHOTOGRAPH PROVIDED BY MANCHESTER-BOSTON REGIONAL AIRPORT, DATED 2009.
OBSTACLE DATA: FEDERAL AVIATION ADMINISTRATION DIGITAL AERONAUTICAL INFORMATION DIGITAL OBSTACLE FILE, EFFECTIVE JUNE, 2010.
HOYLE, TANNER & ASSOC., INC., OBSTRUCTION ANALYSIS, DATED SEPTEMBER, 2009.



INNER PORTION OF THE APPROACH
SURFACE DRAWING - RUNWAY 6
MANCHESTER-BOSTON REGIONAL AIRPORT
MANCHESTER, NEW HAMPSHIRE

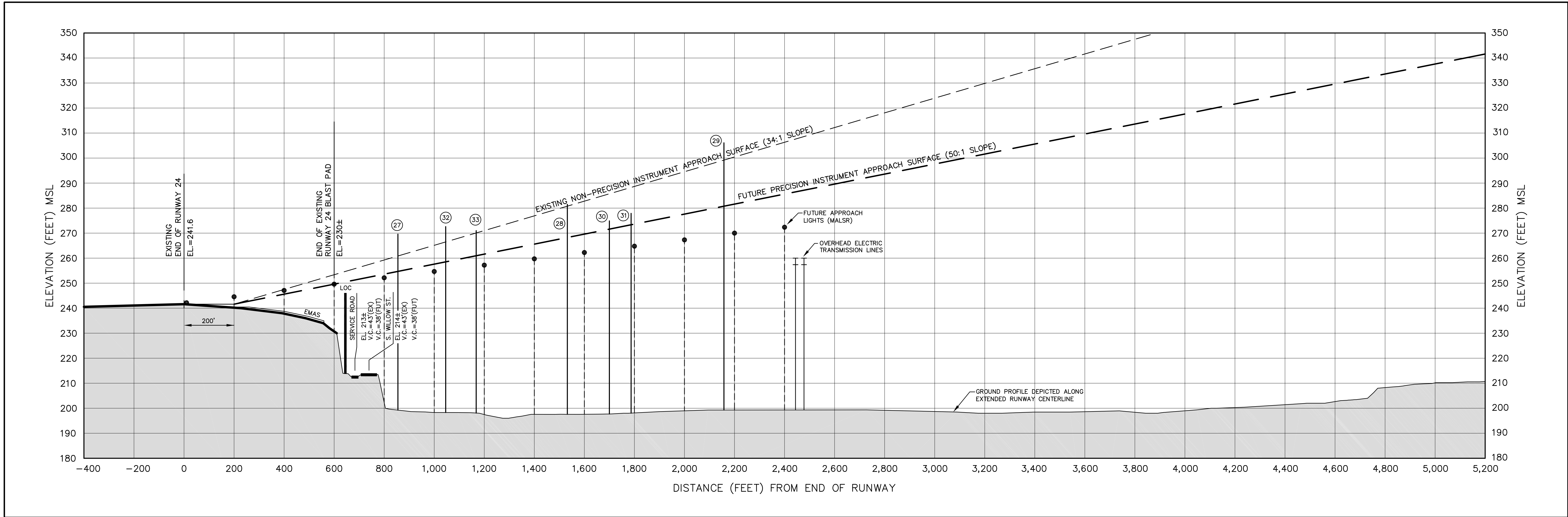
PREPARED FOR
CITY OF MANCHESTER
DEPARTMENT OF AVIATION
MANCHESTER, NEW HAMPSHIRE

DESIGNED: *RJM*
DRAWN: *RJM* CHECKED: *MLT*
PROJECT MANAGER: *FMN*
PROJECT DIRECTOR: *FMN*

DATE: 9/11
SHEET: 11 OF 20



RUNWAY 24 INNER PORTION OF THE APPROACH SURFACE PLAN VIEW



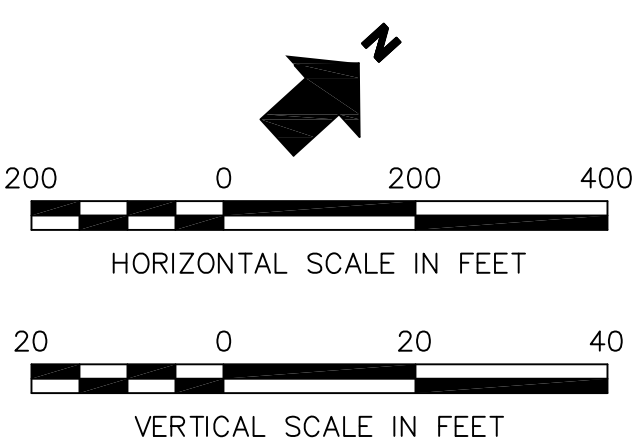
RUNWAY 24 INNER PORTION OF THE APPROACH SURFACE PROFILE VIEW

OBSTACLE DATA TABLE						
NO.	DESCRIPTION	OBSTACLE ELEVATION (FEET) (MSL)	LOWEST AFFECTED SURFACE	PENETRATION (FEET)	RECOMMENDED ACTION	LIGHTED
27	TREE CLUSTER WITH HIGH POINT DEPICTED	270	EX RW 24 APPROACH FUTURE RW 24 APPROACH	15	TRIM OR REMOVE	NO
28	TREE CLUSTER WITH HIGH POINT DEPICTED	282	EX RW 24 APPROACH FUTURE RW 24 APPROACH	1	TRIM OR REMOVE	NO
29	TREE CLUSTER WITH HIGH POINT DEPICTED	306	EX RW 24 APPROACH FUTURE RW 24 APPROACH	23	TRIM OR REMOVE	NO
30	TREE CLUSTER WITH HIGH POINT DEPICTED	275	FUTURE RW 24 APPROACH	3	TRIM OR REMOVE	NO
31	TREE CLUSTER WITH HIGH POINT DEPICTED	278	FUTURE RW 24 APPROACH	5	TRIM OR REMOVE	NO
32	TREE CLUSTER WITH HIGH POINT DEPICTED	273	EX RW 24 APPROACH FUTURE RW 24 APPROACH	7	TRIM OR REMOVE	NO
33	TREE CLUSTER WITH HIGH POINT DEPICTED	271	EX RW 24 APPROACH FUTURE RW 24 APPROACH	10	TRIM OR REMOVE	NO

LEGEND

AREA OF TREE PENETRATION WITHIN CFR PART 77 APPROACH SURFACES. AREA DEFINED DOES NOT REPRESENT EXACT SHAPE OF TREE PENETRATIONS. ONLY WHERE THEY CAN BE FOUND. WITHIN EACH AREA A HIGH POINT IS DEPICTED WITH A POINT AND OBSTRUCTION NUMBER.

SOURCES:
BASE MAP: AERIAL PHOTOGRAPH PROVIDED BY MANCHESTER-BOSTON REGIONAL AIRPORT, DATED 2008
OBSTACLE DATA: FEDERAL AVIATION ADMINISTRATION DIGITAL AERONAUTICAL INFORMATION DIGITAL OBSTACLE FILE EFFECTIVE JUNE, 2010
HOYLE, TANNER & ASSOC., INC., OBSTRUCTION ANALYSIS, DATED SEPTEMBER, 2009.



INNER PORTION OF THE APPROACH SURFACE DRAWING - RUNWAY 24

MANCHESTER-BOSTON REGIONAL AIRPORT
MANCHESTER, NEW HAMPSHIRE

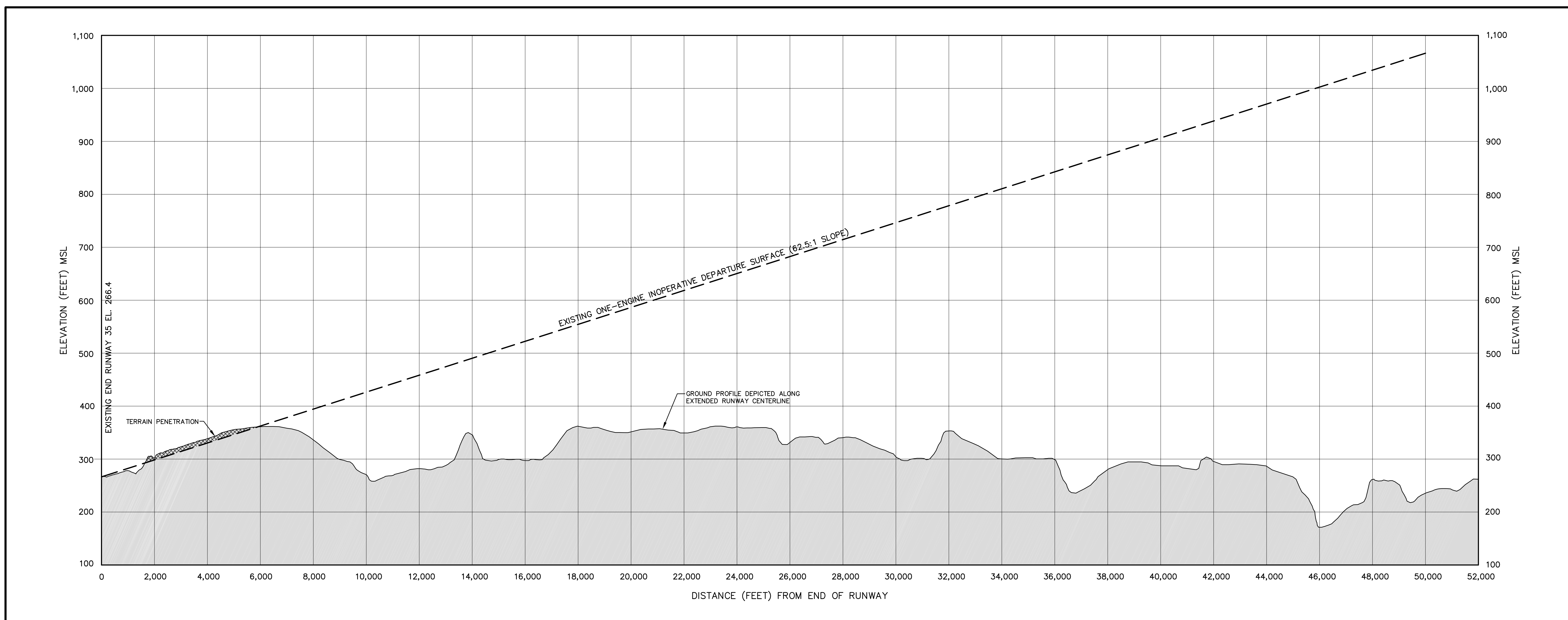
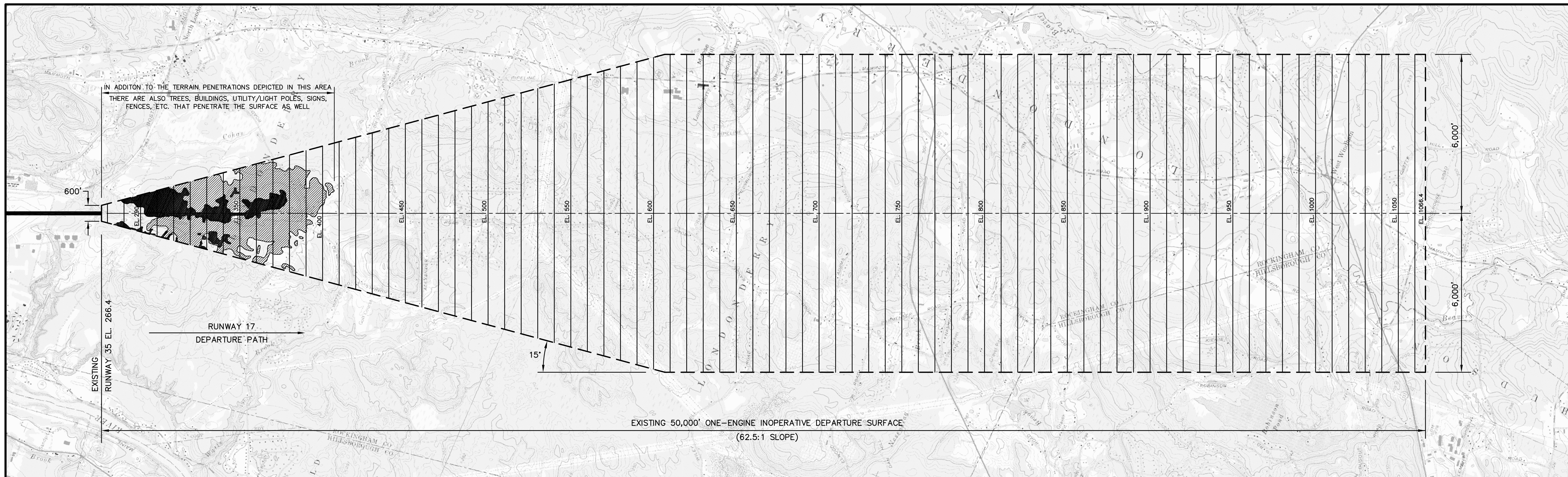
PREPARED FOR
CITY OF MANCHESTER
DEPARTMENT OF AVIATION
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URS

Manchester-Boston
Regional Airport

DESIGNED: *RJM*
DRAWN: *RJM* CHECKED: *MLT*
PROJECT MANAGER: *FMN*
PROJECT DIRECTOR: *FMN*
DATE: 9/11
SHEET: 12 OF 20



ONE-ENGINE INOPERATIVE OBSTACLE IDENTIFICATION SURFACE RUNWAY 17



PREPARED FOR **CITY OF MANCHESTER** **DEPARTMENT OF AVIATION** **MANCHESTER, NEW HAMPSHIRE**

DESIGNED: RJM
DRAWN: RJM CHECKED: MLT
PROJECT MANAGER: FMN
PROJECT DIRECTOR: FMN

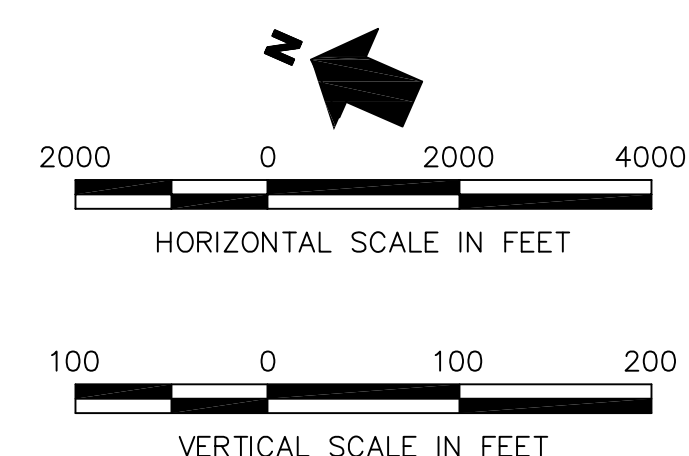
DATE: 9/11
SHEET: 14 OF 20

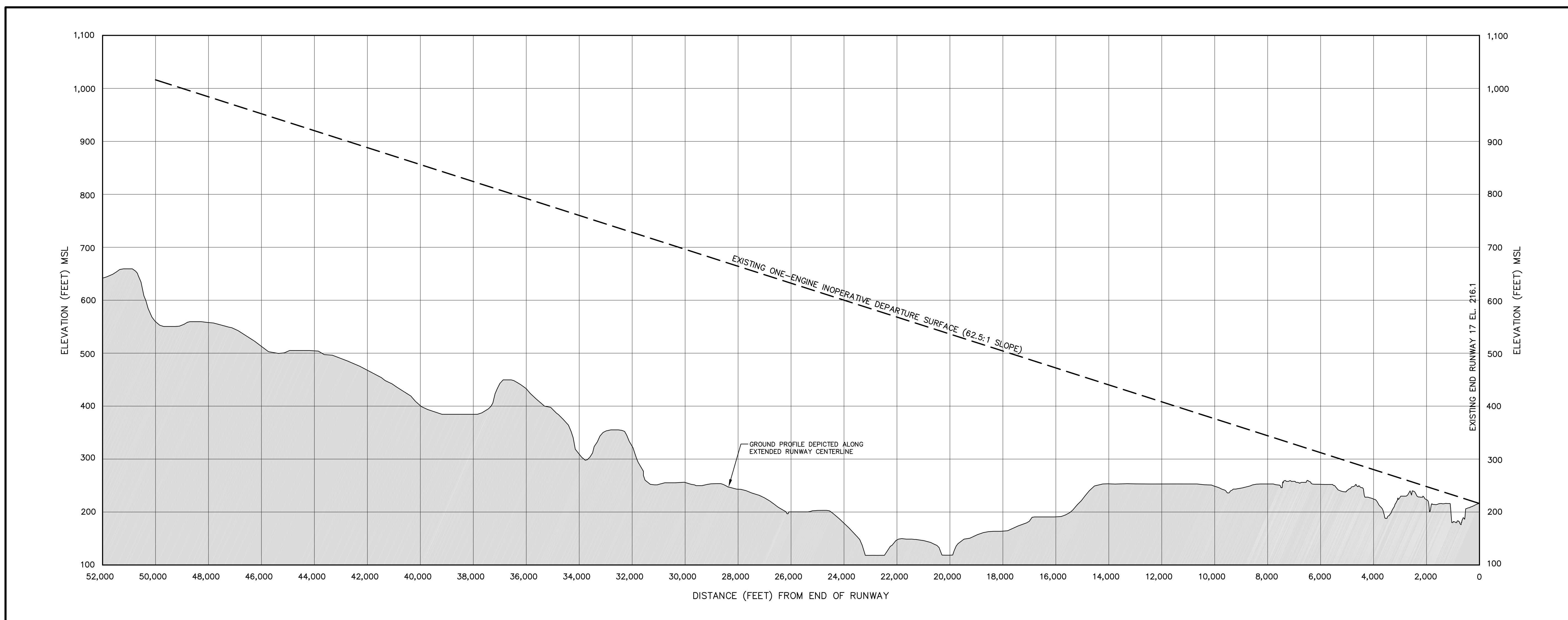
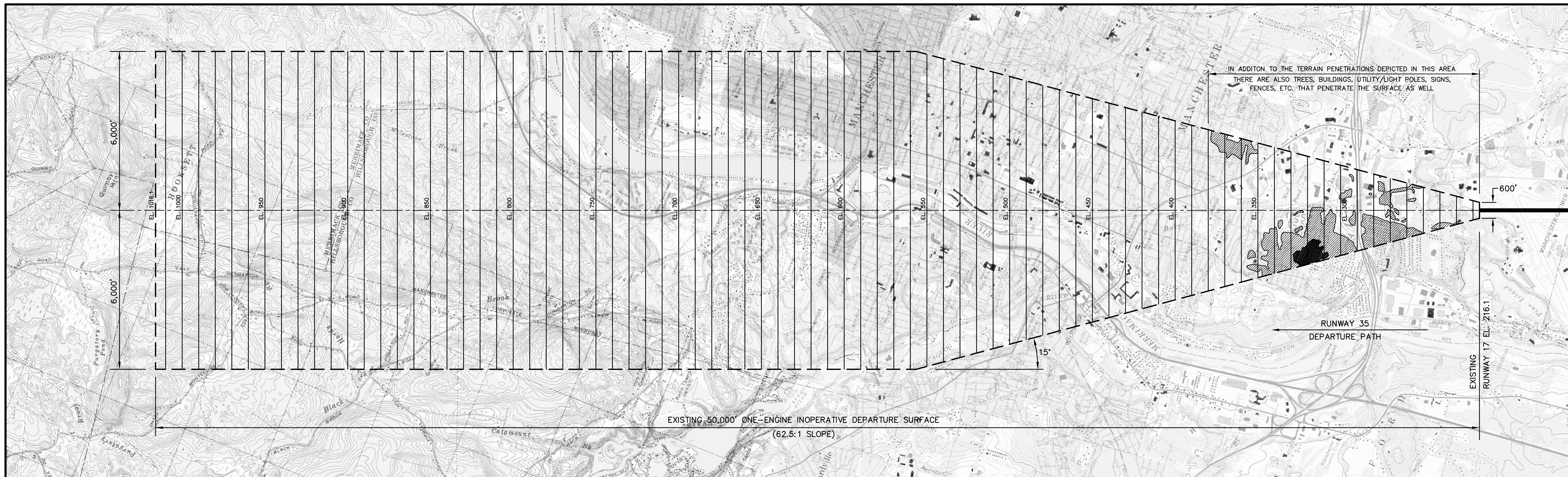
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LEGEND

	AREA OF TREE PENETRATION WITHIN 62.5'*
	AREA OF TERRAIN PENETRATIONS (I.E. GROUND & PAVEMENT).

SOURCES:
 BASE MAP: USGS 7.5' QUADRANGLE MAPS
 OBSTACLE DATA: FEDERAL AVIATION ADMINISTRATION DIGITAL
 AERONAUTICAL INFORMATION DIGITAL OBSTACLE FILE
 EFFECTIVE JUNE, 2010.
 HOYLE, TANNER & ASSOC., INC., OBSTRUCTION ANALYSIS,
 DATED SEPTEMBER, 2009.






ONE-ENGINE INOPERATIVE OBSTACLE IDENTIFICATION SURFACE RUNWAY 35 MANCHESTER-BOSTON REGIONAL AIRPORT MANCHESTER, NEW HAMPSHIRE

PREPARED FOR

CITY OF MANCHESTER

DEPARTMENT OF AVIATION

MANCHESTER, NEW HAMPSHIRE

 Manchester-Boston

URS

URS Corporation
1650 West County Road
Fitchburg, MA 01424
Tel: 603.399.7146


DESIGNED: RJM
DRAWN: RJM CHECKED: MLT
PROJECT MANAGER: FMN
PROJECT DIRECTOR: FMN


DATE: 9/11
SHEET: 15 OF 20

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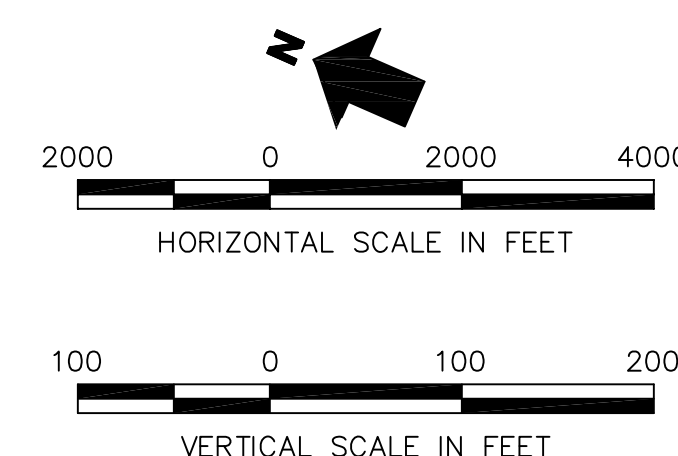
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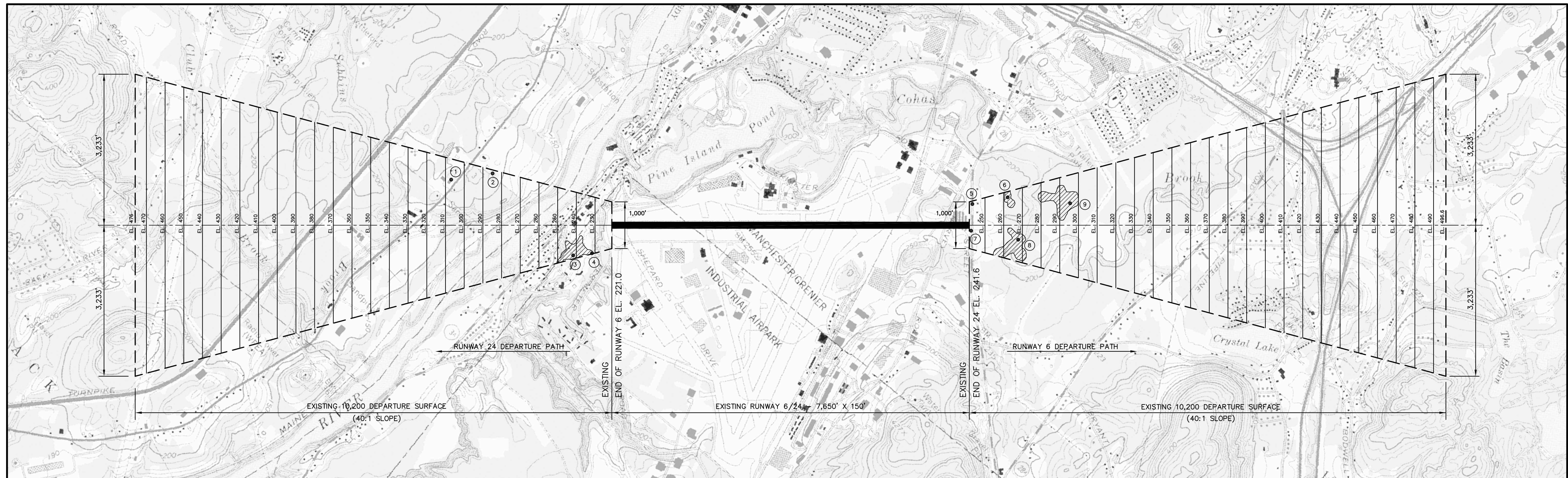
 AREA OF TREE PENETRATION WITHIN 62.5' *
ONE-ENGINE INOPERATIVE OBSTACLE IDENTIFICATION SURFACE. AREA DEFINED DOES NOT REPRESENT EXACT SHAPE OF TREE PENETRATIONS, ONLY WHERE THEY CAN BE FOUND.

 AREA OF TERRAIN PENETRATIONS (I.E. GROUND & PLACEMENT). AREA DEFINED DOES NOT REPRESENT EXACT SHAPE OF TPO PENETRATIONS, ONLY WHERE THEY CAN BE FOUND.

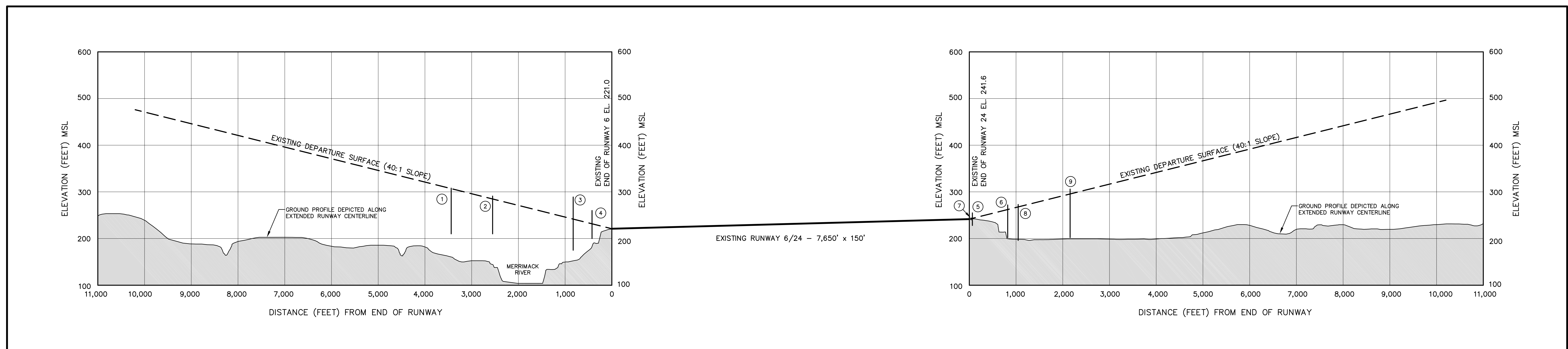
* TERRAIN PENETRATION AREAS SHOWN LIMITED TO EXTENT OF TOPOGRAPHICAL OBSTACLE DATA AVAILABLE FROM THE HOYLE, TANNER & ASSOC., INC., OBSERVATION ANALYSIS, DATED SEPTEMBER 2000.

SOURCES:
 BASE MAP: USGS 7.5' QUADRANGLE MAPS
 OBSTACLE DATA: FEDERAL AVIATION ADMINISTRATION DIGITAL
 AERONAUTICAL INFORMATION DIGITAL OBSTACLE FILE
 EFFECTIVE JUNE, 2010.
 HOYLE, TANNER & ASSOC., INC., OBSTRUCTION ANALYSIS,
 DATED SEPTEMBER, 2009.






RUNWAY 6/24 DEPARTURE SURFACES PLAN VIEW



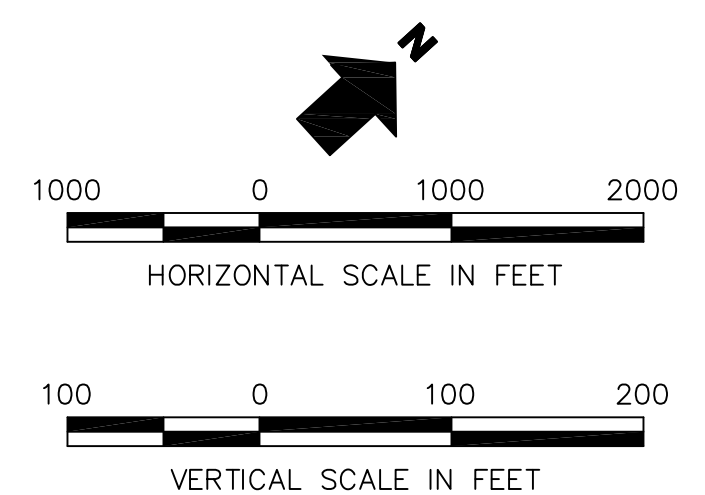
RUNWAY 6/24 DEPARTURE SURFACES PROFILE VIEW

OBSTACLE DATA TABLE						
NO.	DESCRIPTION	OBSTACLE SURFACE (FEET)	LOWEST AFFECTED SURFACE (FEET)	PENETRATION (FEET)	RECOMMENDED ACTION	LIGHTED
1	TREE CLUSTER WITH HIGH POINT DEPICTED	308	RW 24 40.1: DEPART	1	TRIM OR REMOVE	NO
2	TREE CLUSTER WITH HIGH POINT DEPICTED	291	RW 24 40.1: DEPART	6	TRIM OR REMOVE	NO
3	TREE CLUSTER WITH HIGH POINT DEPICTED	289	RW 24 40.1: DEPART	47	TRIM OR REMOVE	NO
4	BUILDING	295	RW 24 40.1: DEPART	28	LIGHT	NO
5	LIGHT POLE	255	RW 6 40.1: DEPART	12	LIGHT	NO
6	TREE CLUSTER WITH HIGH POINT DEPICTED	272	RW 6 40.1: DEPART	10	TRIM OR REMOVE	NO
7	REL.	244	RW 6 40.1: DEPART	1	FIXED BY FUNCTION	NO
8	TREE CLUSTER WITH HIGH POINT DEPICTED	296	RW 6 40.1: DEPART	5	TRIM OR REMOVE	NO
9	TREE CLUSTER WITH HIGH POINT DEPICTED	306	RW 6 40.1: DEPART	10	TRIM OR REMOVE	NO

LEGEND

 AREA OF TREE PENETRATION WITHIN 40:1 DEPARTURE SURFACE. AREA DEFINED DOES NOT REPRESENT EXACT SHAPE OF TREE PENETRATIONS, ONLY WHERE THEY CAN BE FOUND. WITHIN EACH AREA A HIGH POINT IS DEPICTED WITH A POINT AND OBSTRUCTION NUMBER.

SOURCES:
 BASE MAP: USGS 7.5' QUADRANGLE MAPS
 OBSTACLE DATA: FEDERAL AVIATION ADMINISTRATION DIGITAL
 AERONAUTICAL INFORMATION DIGITAL OBSTACLE FILE
 EFFECTIVE JUNE, 2010.
 HOYLE, TANNER & ASSOC., INC., OBSTRUCTION ANALYSIS,
 DATED SEPTEMBER, 2009.



**DEPARTURE SURFACES
DRAWING - RUNWAY 6/24**

**MANCHESTER-BOSTON REGIONAL AIRPORT
MANCHESTER, NEW HAMPSHIRE**

PREPARED FOR
CITY OF MANCHESTER
DEPARTMENT OF AVIATION
MANCHESTER, NEW HAMPSHIRE

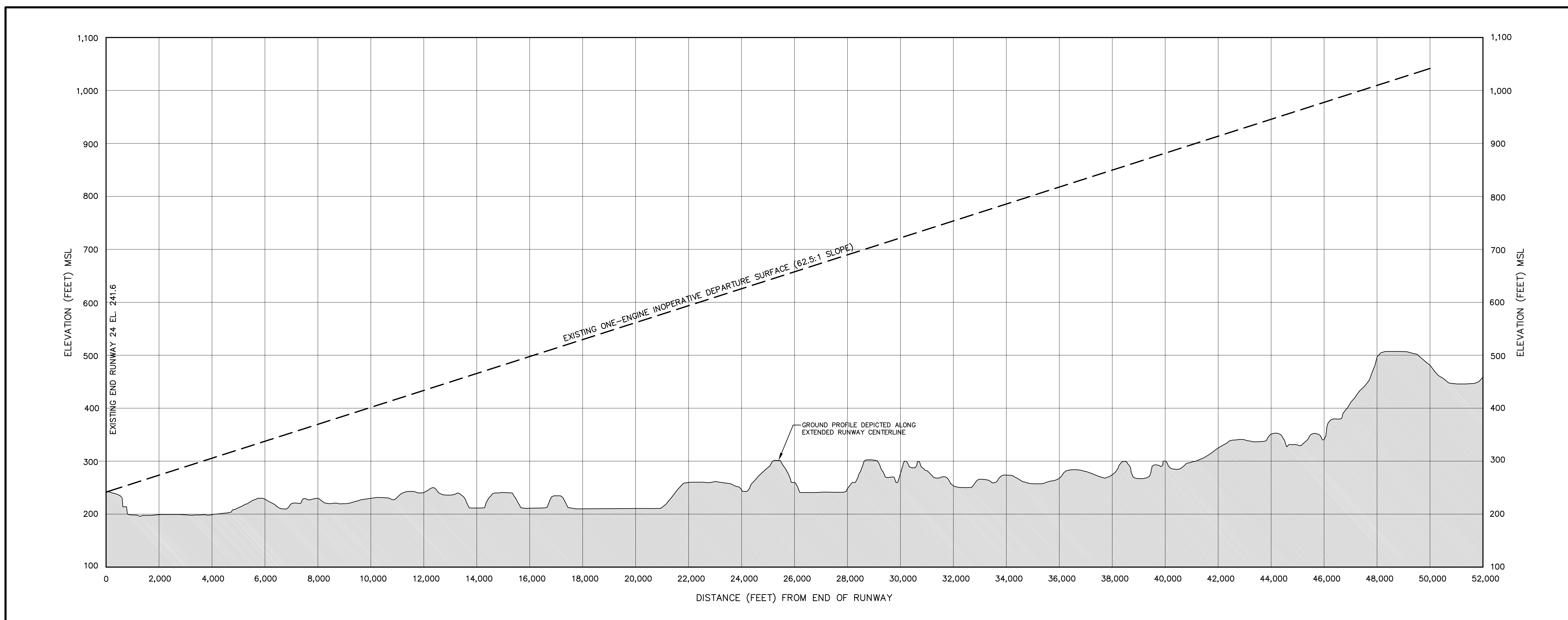
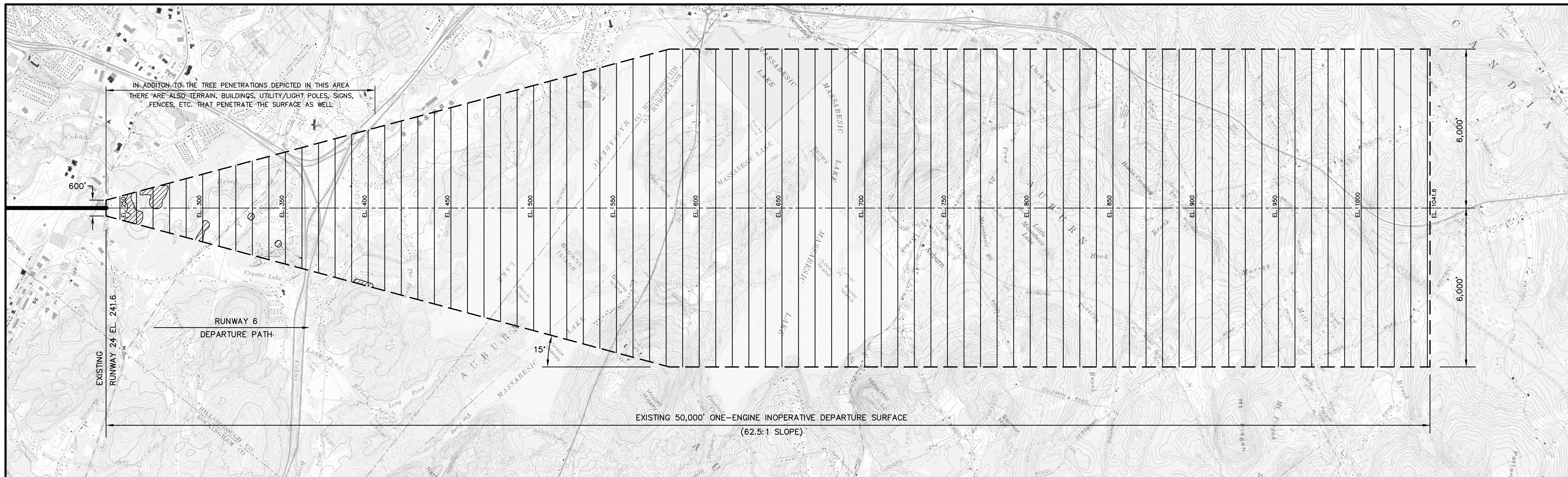
URS
7650 West Courtney
Campbell Causeway
Tampa, FL 33607-1462
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Manchester-Boston
REGIONAL AIRPORT

DESIGNED: RJM
DRAWN: RJM CHECKED: MLT
PROJECT MANAGER: FMN
PROJECT DIRECTOR: FMN

DATE: 9/11
SHEET: 16 OF 20



ONE-ENGINE INOPERATIVE OBSTACLE IDENTIFICATION SURFACE RUNWAY 6

PREPARED FOR

**CITY OF MANCHESTER
DEPARTMENT OF AVIATION
MANCHESTER, NEW HAMPSHIRE**


DESIGNED: RJM
DRAWN: RJM CHECKED: MLT
PROJECT MANAGER: FMN
PROJECT DIRECTOR: FMN

DATE: 9/11
SHEET: 17 OF 20

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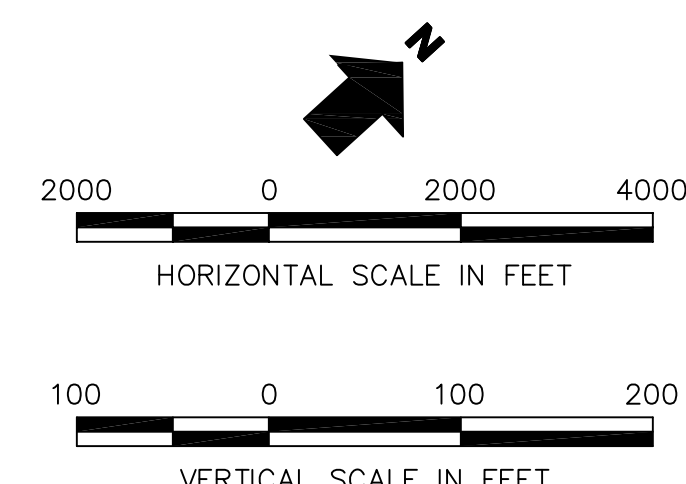
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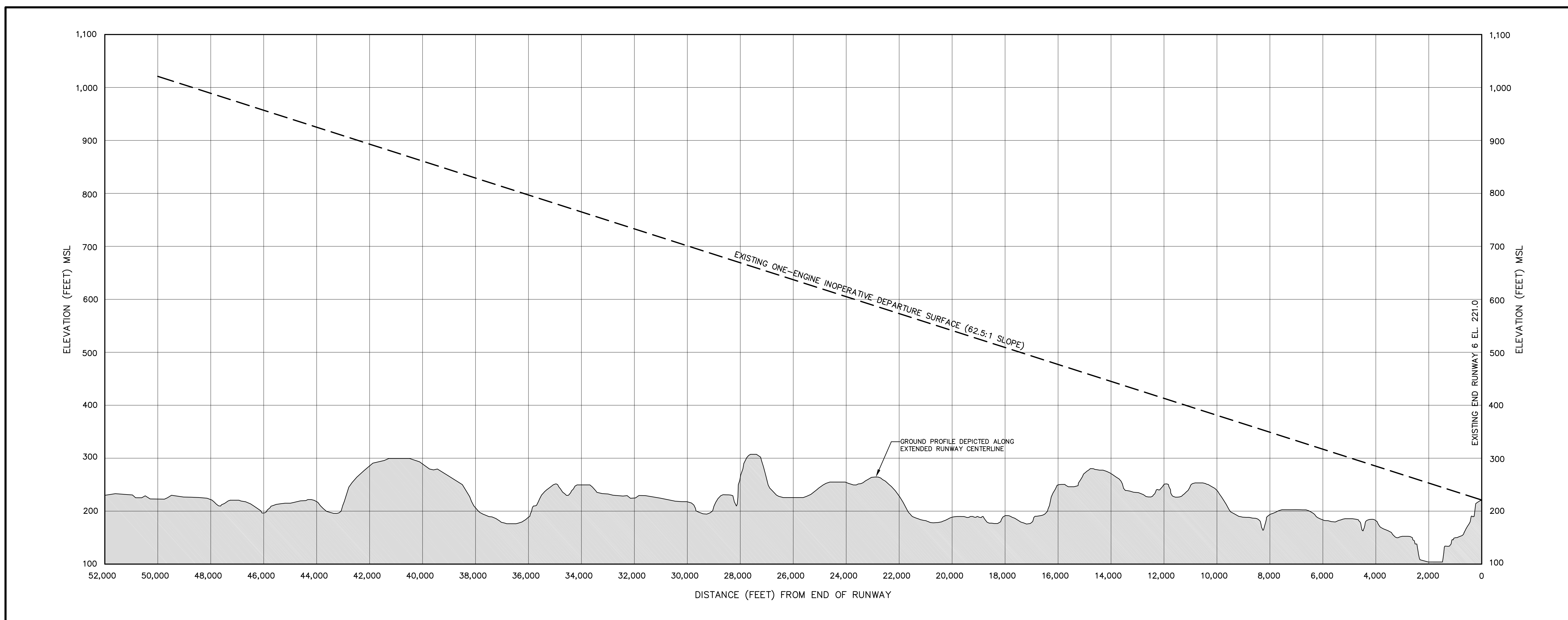
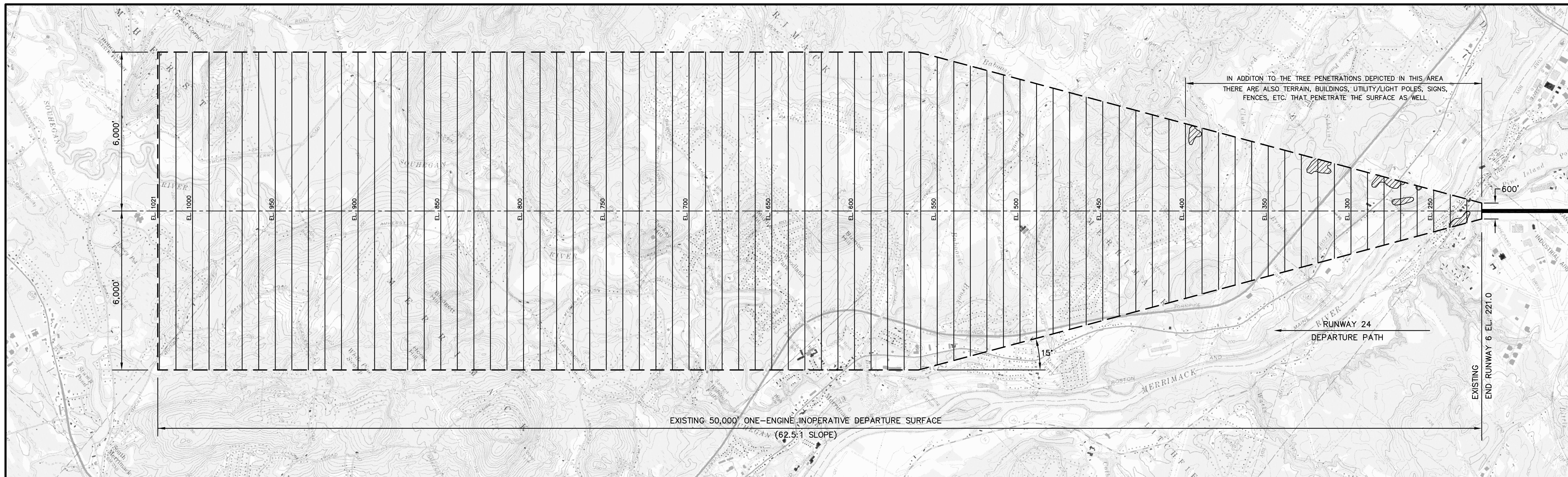
LEGEND

 AREA OF TREE PENETRATION WITHIN 62.5:1*
 ONE-ENGINE INOPERATIVE OBSTACLE IDENTIFICATION SURFACE. AREA DEFINED DOES NOT REPRESENT EXACT SHAPE OF TREE PENETRATIONS, ONLY WHERE THEY CAN BE FOUND.

* TERRAIN PENETRATION AREAS SHOWN LIMITED TO EXTENT OF TOPOGRAPHICAL OBSTACLE DATA AVAILABLE FROM THE HOYLE, TANNER & ASSOC., INC., OBSTRUCTION ANALYSIS, DATED SEPTEMBER, 2009.

SOURCES:
BASE MAP: USGS 7.5' QUADRANGLE MAPS
OBSTACLE DATA: FEDERAL AVIATION ADMINISTRATION DIGITAL
AERONAUTICAL INFORMATION DIGITAL OBSTACLE FILE
EFFECTIVE JUNE, 2010.
HOYLE, TANNER & ASSOC., INC., OBSTRUCTION ANALYSIS,
DATED SEPTEMBER, 2009.





**ONE-ENGINE INOPERATIVE
OBSTACLE IDENTIFICATION SURFACE
RUNWAY 24**

**MANCHESTER-BOSTON REGIONAL AIRPORT
MANCHESTER, NEW HAMPSHIRE**

PREPARED FOR


**CITY OF MANCHESTER
DEPARTMENT OF AVIATION
MANCHESTER, NEW HAMPSHIRE**

DESIGNED: RJM
DRAWN: RJM CHECKED: MLT
PROJECT MANAGER: FMN
PROJECT DIRECTOR: FMN

DATE: 9/11
SHEET: 18 OF 20

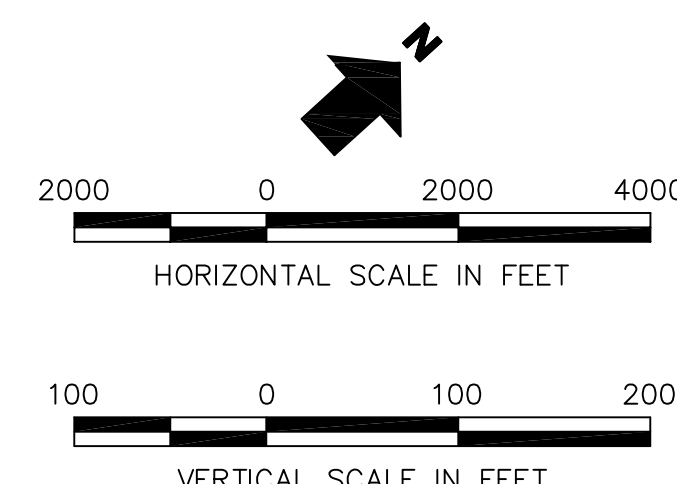
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LEGEND

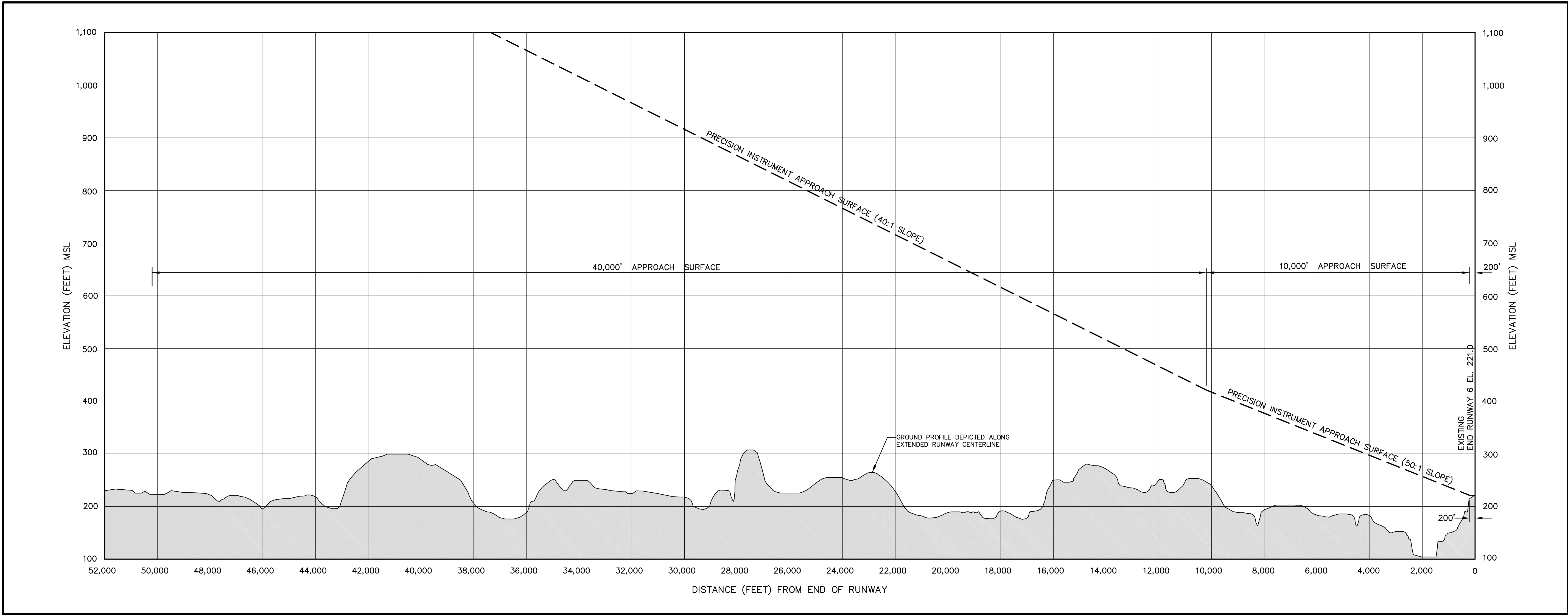
 AREA OF TREE PENETRATION WITHIN 62.5:1+ ONE-ENGINE INOPERATIVE OBSTACLE IDENTIFICATION SURFACE. AREA DEFINED DOES NOT REPRESENT EXACT SHAPE OF TREE PENETRATIONS, ONLY WHERE THEY CAN BE FOUND.

* TERRAIN PENETRATION AREAS SHOWN LIMITED TO EXTENT OF TOPOGRAPHICAL OBSTACLE DATA AVAILABLE FROM THE HOYLE, TANNER & ASSOC., INC., OBSTRUCTION ANALYSIS, DATED SEPTEMBER, 2009.

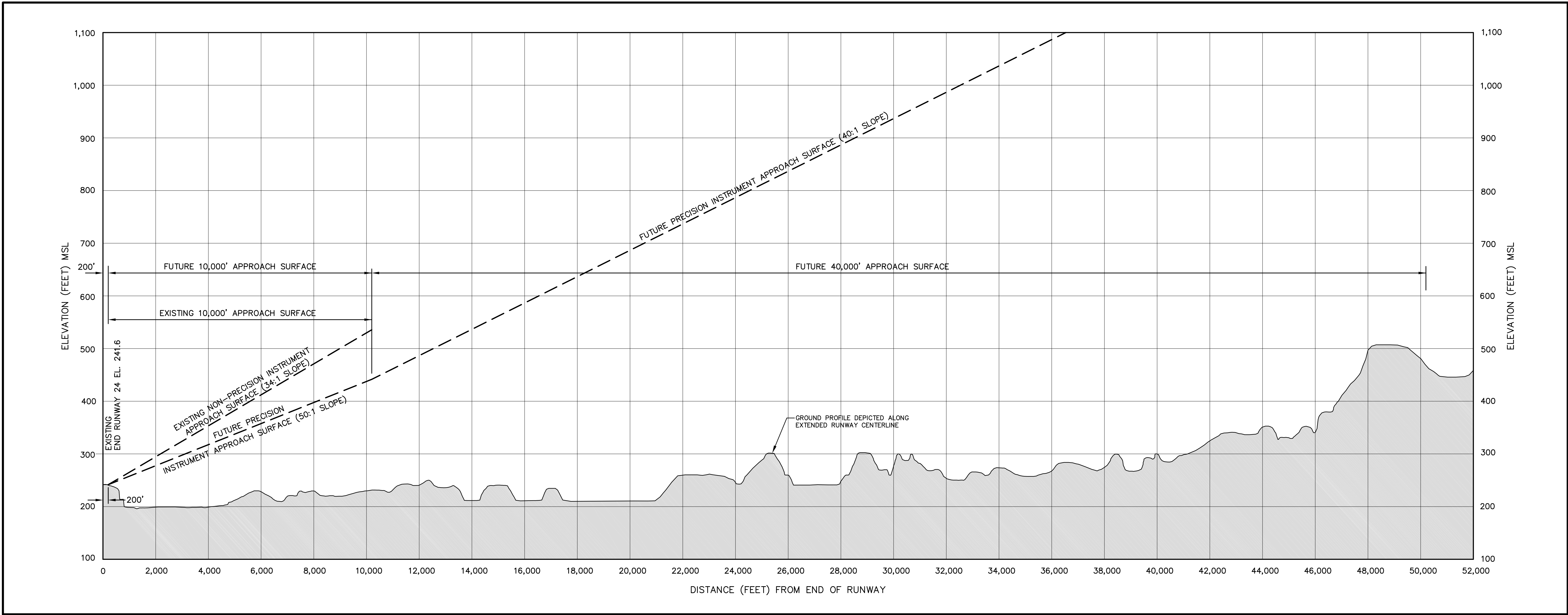
SOURCES:
BASE MAP: USGS 7.5' QUADRANGLE MAPS
OBSTACLE DATA: FEDERAL AVIATION ADMINISTRATION DIGITAL
AERONAUTICAL INFORMATION DIGITAL OBSTACLE FILE
EFFECTIVE JUNE, 2010.
HOYLE, TANNER & ASSOC., INC., OBSTRUCTION ANALYSIS,
DATED SEPTEMBER, 2009.



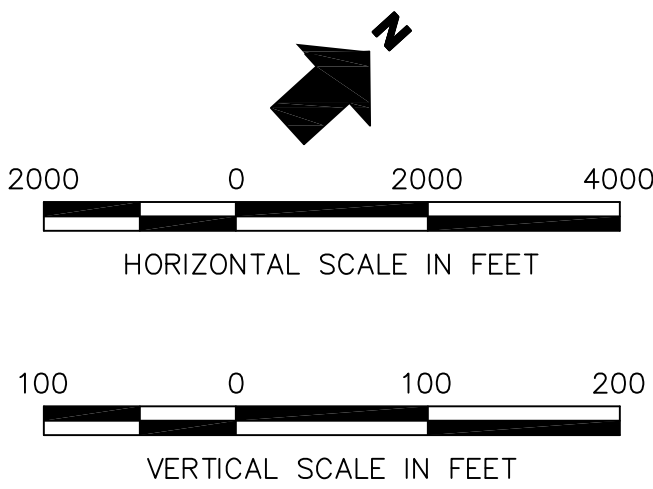
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RUNWAY 6 APPROACH SURFACE VIEW



RUNWAY 24 APPROACH PROFILE VIEW



**APPROACH SURFACE PROFILE
RUNWAY 6/24
MANCHESTER-BOSTON REGIONAL AIRPORT
MANCHESTER, NEW HAMPSHIRE**

PREPARED FOR
**CITY OF MANCHESTER
DEPARTMENT OF AVIATION
MANCHESTER, NEW HAMPSHIRE**

URS
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7900 West County
Tampa, FL 33607-1462
PH: 813.286-1111

DESIGNED: *RJM*
DRAWN: *RJM* CHECKED: *MLT*
PROJECT MANAGER: *FMN*
PROJECT DIRECTOR: *FMN*

DATE: 9/11
SHEET: **20** OF **20**